TI-Nspire™ CX II Handhelds Guidebook

TI-Nspire™ CX II

TI-Nspire™ CX II CAS

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Important Information

Actual products may vary slightly from provided images.

TI-Nspire™ CX II Handhelds: TI-Nspire™ CX II, TI-Nspire™ CX II CAS, TI-Nspire™ CX II-T, TI-Nspire™ CX II-T CAS, TI-Nspire™ CX II-C CAS, and TI-Nspire™ CX II EZ-Spot

Contents

Getting Started with TI-Nspire™ CX II Handhelds

The TI-Nspire™ CX II and the TI-Nspire™ CX II CAS are the newest handhelds in the TI-Nspire™ family of products. Featuring a backlit color display and a slimmer form, the handhelds provide touchpad navigation, dynamic graphing, and interactive computer features.

The handhelds and the TI-Nspire™ software share the same functionality, enabling you to transfer class assignments from the handheld to the computer or transfer documents to the handheld when you need to be mobile. Start assignments at school, and then finish the work at home to take advantage of the software's full-color display and easy-to-use navigation. Use the software to download the latest software and handheld operating system updates as they become available to ensure you have the latest enhancements.

This guide covers the following TI-Nspire™ CX II handhelds:

- TI-Nspire™ CX II / TI-Nspire™ CX II CAS
- TI-Nspire™ CX II-T / TI-Nspire™ CX II-T CAS
- TI-Nspire™ CX II-C CAS
- TI-Nspire™ CX II EZ-Spot

While they operate identically in many ways, there are a few distinctions. If there are differences between the Numeric, Exact Arithmetic, or CAS handhelds, it is pointed out and the appropriate operation is described.

About Math Modes

TI-Nspire CX II handhelds perform calculations in one of three modes: Numeric, Exact Arithmetic, or Computer Algebra System (CAS).

Numeric mode supports results in terms of floating point numbers, integers, and stacked fractions only.

Exact Arithmetic mode supports results in terms of floating point numbers, integers, stacked fractions, π, e, radicals √, and other constants such as ln(5) and sin(2).

CAS mode supports the same results as Exact Arithmetic as well as symbol manipulation such as x+x, and CAS functions such as symbolic factoring, solving equations, limits, and indefinite integration.

The math modes that are available will depend on which TI-Nspire CX II handheld model you have:

Handheld Model	Numeric	Exact Arithmetic	CAS
TI-Nspire CX II	✓		
TI-Nspire CX II CAS	✓ [1]	✓	✓

Handheld Model	Numeric	Exact Arithmetic	CAS
TI-Nspire CX II-T	✓ [2]	✓	
TI-Nspire CX II-T CAS	✓ [1]	✓	✓
TI-Nspire CX II-C CAS	✓ [1]	✓	✓

[1] CAS mode turned off

[2] Exact Arithmetic mode turned off

TI-Nspire™ CX II Handheld Keys

Use the TI-Nspire™ Touchpad as you would a laptop touchpad. You can also press the outer edges to move right, left, up, and down.

[esc] Removes menus or dialog boxes from the screen. Also stops a calculation in progress.

[Scratchpad] Opens the Scratchpad for performing quick calculations and graphing.

[tab] Moves to the next entry field.

[shift] Makes the next character typed upper-case.

[ctrl] Provides access to the function or character shown above each key. Also enables shortcuts in combination with other keys.

[on] Turns on the handheld. If the handheld is on, this key displays the home screen.

[doc] Opens the Document menu.

[menu] Displays the application or context menu.

[del] Deletes the previous character.

[var] Displays stored variables.

[enter] Evaluates an expression, executes an instruction, or selects a menu item.

Note: A ▶ symbol on a key indicates access to multiple options. To access an option, press [?!▸] repeatedly or use the arrow keys on the Touchpad. Press [enter] or click to select the option.

Preparing the TI-Nspire™ CX II Handheld for Use

The TI-Nspire™ CX II handheld comes equipped with a Li-ion rechargeable battery. The handheld also comes with the following accessories:

- Standard mini-A to mini-B USB cable for transferring files to another handheld

- Standard A to mini-B USB cable for transferring files to and from a computer and for charging the battery

Charging the Handheld

▶ Using one of the following options, charge the battery for at least four hours to ensure optimum performance.

  - Connect the handheld to a computer using a standard A to mini-B USB cable. To download software that includes a driver, go to education.ti.com/software.
  - Connect to a wall outlet using a TI wall adapter (sold separately).
  - If in a classroom setting, place the handheld or multiple handhelds in a TI-Nspire™ CX Docking Station or a TI-Nspire™ Docking Station.

Note: The TI-Nspire™ CX II handheld has a Deep Sleep feature to maximize battery life during extended storage periods. To put the handheld in Deep Sleep mode, press and hold down the blue reset button on the back of the handheld for at least 4 seconds. To wake the handheld from Deep Sleep mode, press [on] for at least 4 seconds or apply USB (computer or wall adapter) or Docking Station power. After waking the handheld, you can turn it on anytime by pressing [on].

Note: For more information about recharging batteries, see *Configuring TI-Nspire™ Handhelds*.

Turning On the TI-Nspire™ CX II Handheld for the First Time

After charging the battery, press [on] to turn on the handheld. A progress bar is displayed while the operating system loads. Next, choose preferences for language and font size when prompted.

Note: To turn the handheld off, press [ctrl] [on]. The settings and memory contents are retained.

Using Automatic Power Down™

To prolong battery life, the Automatic Power Down™ (APD™) feature turns off the handheld after three minutes of inactivity. When this happens, press [on] to turn the handheld on and return to the last document or last menu accessed. To change the default setting, press [on] [5] [3] to access the **Handheld Setup** screen where you can change the **Power Standby** setting.

Note: For more information about setting up the handheld, see *Configuring Handhelds*.

Choosing a Language

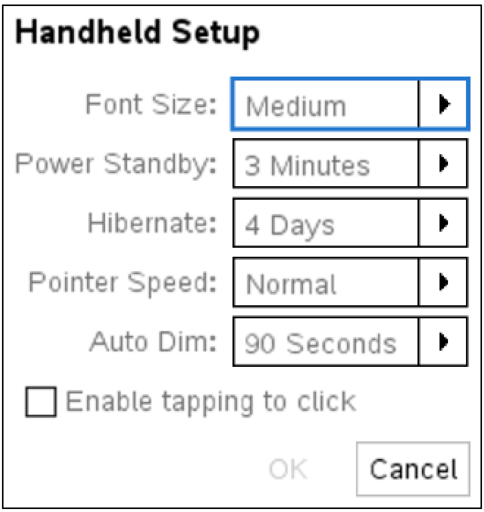
After the OS is loaded, select a preferred language.



1. Press ▶ to open the drop-down list.
2. Press ▼ to scroll through the languages, and then press or enter to select a language.
3. Press tab to highlight the **OK** button, and then press or enter to save the language selection.

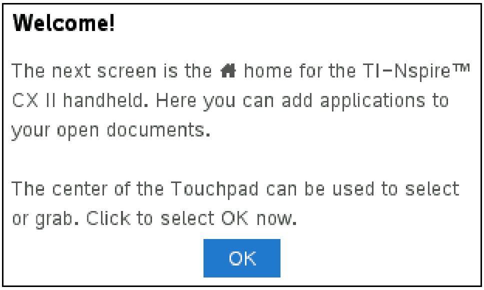
Choosing a Font Size

Next, select a font size for the display.



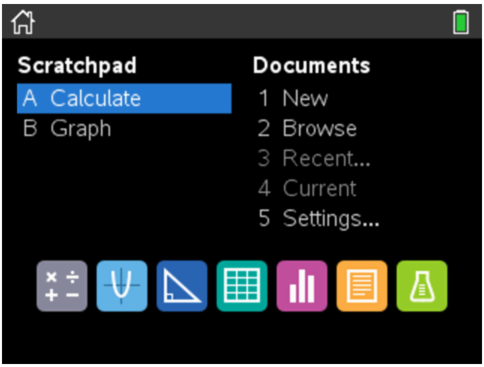
1. Press ▶ to open the drop-down list.
2. Press ▼ to highlight the font size, and then press or enter to select it.
3. Press tab to highlight the **OK** button, and then press or enter.

   The **Welcome!** screen opens.



4. To continue, press [click] or [enter] to select **OK**.

   The **Home** screen opens.



Adjusting the Brightness of the Backlighting

The screen on the TI-Nspire™ CX II handheld is backlit making it easier to use in all lighting conditions. By default, the brightness setting is medium. To adjust the backlight brightness:

- **Dimmer:** Press and hold [ctrl] and tap [−].
- **Brighter:** Press [ctrl] and tap [+].

Using the TI-Nspire™ Touchpad

Use the Touchpad to navigate or complete any task that can be completed using the arrow and **Enter** keys. Use the Touchpad to navigate in two ways:

- Use it like a computer touchpad by moving your fingertip in a sliding motion on the center area of the Touchpad to activate and move the mouse pointer. Click or tap the center of the Touchpad to select a menu option or complete an action.

- Press the arrow keys on the outside edge of the Touchpad to nudge the mouse pointer up, down, left, or right, and then click tab or press enter to complete an action.

  If you hold down an arrow key, the mouse pointer continues to move in that direction.

Note: If the mouse pointer is visible on a command or file, click or tap in the center of the Touchpad to select that command or file. If the command or file is highlighted, move the pointer over that item or press enter to select it.

When working in an application, use the Touchpad to access more information about problems. For example, hovering over a Graphs & Geometry object displays information about variables used in that object and about tools that are available.

Some users prefer to customize their Touchpad settings; to speed up or slow down their pointer, or to enable tap to click. To change the default settings for the Touchpad, see *Configuring Handhelds*.

Understanding the Scratchpad

Use the Scratchpad to make quick calculations and graphs without affecting the current TI-Nspire™ document. For example, when you need a quick way to test a calculation before you add it to a document, you can open the Scratchpad application and perform the calculation. Then, you can either discard the calculation or add it to a document. For more information about the Scratchpad, see *Using the Scratchpad*.

Using the Home Screen

The **Home** screen provides a starting point for all activities performed on a handheld:

- Opening the scratchpad for quick calculations and graphing
- Creating new documents
- Opening and managing existing documents
- Defining settings and viewing status
- Viewing hints for operating the handheld
- Accessing recent documents
- Returning to the current document

Note: Press on to toggle between the **Home** screen and the current document.

Home Screen Options

Menu Option	Purpose
Scratchpad Use the Scratchpad menu options to open a Calculator or Graph application without affecting your document.	

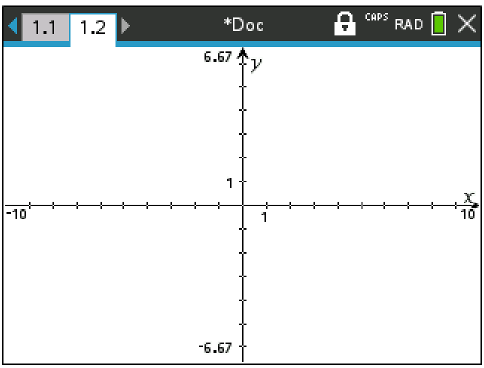
<table>
<tr><th>Menu Option</th><th>Purpose</th></tr>
<tr><td colspan="2">While in Scratchpad, press to toggle between Scratchpad applications: Calculate and Graph.</td></tr>
<tr><td>Calculate</td><td>Opens the Scratchpad with a Calculator application active. From the Home screen, type A.</td></tr>
<tr><td>Graph</td><td>Opens the Scratchpad with a Graph application active. From the Home screen, type B.</td></tr>
<tr><td colspan="2">Documents
To select options for working with documents, press the associated number or use the Touchpad to select an icon then press or enter.</td></tr>
<tr><td>New</td><td>Opens a new TI-Nspire™ document with available applications listed.</td></tr>
<tr><td>Browse</td><td>Opens the file browser where you can open existing TI-Nspire™ documents or send files to others.</td></tr>
<tr><td>Recent</td><td>Lists the five most recently saved documents.</td></tr>
<tr><td>Current</td><td>Goes to the document that is currently open.</td></tr>
<tr><td>Settings</td><td>Check the status of the handheld and change settings.</td></tr>
<tr><td colspan="2">Application icons
To add a new page to the current document, select an application icon. If no document is open, a new document opens with the selected application on a new page.</td></tr>
<tr><td>Calculator</td><td>Adds a page to a document for entering and evaluating math expressions.</td></tr>
<tr><td>Graphs</td><td>Adds a page for graphing and exploring functions.</td></tr>
<tr><td>Geometry</td><td>Adds a page for creating and exploring geometric shapes.</td></tr>
<tr><td>Lists & Spreadsheet</td><td>Adds a page for working with data in tables.</td></tr>
</table>

Menu Option	Purpose
Data & Statistics	Adds a page and provides tools used to visualize sets of data in different types of plots and provides tools for manipulating data sets to explore relationships between the sets of data.
Notes	Provides text editing functions for adding text to TI-Nspire™ documents for use as notes or to share with other users.
Vernier DataQuest™	Adds a page for collecting and analyzing data from sensors or probes.

To learn more about applications and documents, see *Working with Documents on TI-Nspire™ Handhelds*.

The TI-Nspire™ CX II Handheld Screen

When you are working in a document on a handheld, icons at the top of the screen provide information about the status of handheld operations and provide an easy way to change settings. The icons are described below.



Icon	Function
◀ ▶	**Page scrolling arrows** - Use the touchpad to click these arrows and scroll through the pages in a document.
1.1	**Page tab** - Labels the problem number and page number of the active page. For example, a label of **1.2** identifies Problem **1**, Page **2**. If problems are named, hover the pointer over a tab to view the page name.
***Doc**	**Document name** - Shows the current document name. An asterisk by the document name indicates changes were made since the document was last

Icon	Function
	saved. Click the name to open the **Documents** menu.
	Press to Test - Indicates that the handheld is in Press-to-Test mode.
	Login status - Shows whether the handheld is searching for an access point (blinking), found an access point (solid), not communicating, connected and ready to log in (a blinking arrow), or logged in and charged (a solid arrow). Click here to view Settings & Status.
CAPS	Shows status of the [⇧shift], [ctrl], and [CAPS] keys.
RAD	**Angle Mode** - Shows an abbreviation of the angle mode (Degrees, Radians, or Gradians) in effect. Hover the pointer over the indicator to see the full name. **Note:** Click the indicator to toggle between RAD and DEG modes.
	Settings & Status - Shows an indicator of the current charge level of the battery. Hover the pointer over the indicator to read the status as a percent. Click the icon to open the **Settings & Status** menu.
	Close document - Click the icon to close the current document. If information is unsaved, save or discard when prompted.

Using Hints

Hints are quick tips available throughout the software on the handheld. There are several easy ways to access Hints:

- Press [ctrl] [trig].
- Some dialog boxes contain a question mark icon. Click this icon to open Hints for that task.

To scroll through the Hints, use the Touchpad or arrow keys:

- To page down, press [ctrl] [3].
- To page up, press [ctrl] [9].
- To go to the end of the Hints file, press [ctrl] [1].
- To go back to the beginning of the file, press [ctrl] [7].

Using Keyboard Shortcuts

Use the following keyboard shortcuts to perform common functions. You can also perform all functions by selecting the options from menus.

Getting Help	
Open Hints	ctrl trig
Editing Text	
Cut	ctrl X
Copy	ctrl C
Paste	ctrl V
Undo	ctrl Z ctrl esc
Redo	ctrl Y ⇧shift esc
Toggle approximate and exact results **Python Editor and Shell:** Add a new line after the current line.	ctrl enter
English: Change key to include appropriate accent Chinese: Insert character	[flag key]
Inserting Characters and Symbols in a document	
Display character/symbol palette	ctrl [book key]
Underscore	ctrl ␣
Display math template palette	[template key]
Backslash (\ )	⇧shift ÷
Manual data capture point	ctrl .
Clear	ctrl del
Caps Lock	ctrl ⇧shift
Store	ctrl var

Square brackets	ctrl (
Curly brackets	ctrl)
Display Trig symbol palette	trig
Equals symbol	=
Display pi symbols palette (π, ⁄, θ, and so on)	π▸
Display equality/inequality palette (>, <, ≠, ≤, ≥, and |)	ctrl =
Display marks and letter symbols palette (? ! $ ° ' % " : ; _ \)	?!▸
Square root	ctrl x^2
log	ctrl 10^x
ln	ctrl e^x
ans	ctrl (–)
Managing Documents	
Open document menu	doc▾
Open document	ctrl O
Close document	ctrl W
Create new document	ctrl N
Insert new page	ctrl I
Select application	ctrl K
Save current document	ctrl S ctrl [scratchpad key]
Navigation	

Top of page **Python Editor and Shell:** Moves cursor to the beginning of the first line in the program.	ctrl 7
End of page **Python Editor and Shell:** Moves cursor to the end of the last line in the program.	ctrl 1
Page Up	ctrl 9
Page Down	ctrl 3
Up a level in the hierarchy	ctrl ▲
Down a level in the hierarchy	ctrl ▼
Context menu for selection	menu
Extends selection in direction of arrow	⇧shift Any arrow
Python Editor and Shell: Indents text on the current line or selected lines or navigates between inline prompts	tab
Navigating in Documents	
Displays previous page	ctrl ◀
Displays next page	ctrl ▶
Displays Page Sorter	ctrl ▲
Exits Page Sorter	ctrl ▼
Switch between applications on a split page	ctrl tab
Moves focus backward within page **Python Editor and Shell:** Dedents text on the current line or selected lines or navigates backwards between inline prompts	⇧shift tab

Wizards and Templates	
Add a column to a matrix after the current column	⇧shift ↵
Add a row to a matrix after the current row **Python Editor and Shell:** Add a new line after the current line.	↵
Integration template	⇧shift +
Derivative template	⇧shift −
Math template palette	[template key] or ctrl [flag key]
Fraction template	ctrl ÷
Modifying Display	
Increase contrast	ctrl +
Decrease contrast	ctrl −
Power off	ctrl ⌂on
Application-Specific Shortcuts	
Notes/Program Editor/Python Editor: Select all **Press-to-Test:** Select all items in the dialog	ctrl A
Program Editor/Python Editor: Check syntax and store	ctrl B
Program Editor/Python Editor: Find	ctrl F
Geometry/Graph: Hide/Show Entry Line **Lists & Spreadsheet/Program Editor/Python Editor:** Go To	ctrl G
Program Editor/Python Editor: Find and Replace	ctrl H
Calculator/Program Editor/Python Editor and Shell: Beginning of line	ctrl 8

Calculator/Program Editor/Python Editor and Shell: End of line	ctrl 2
Notes: Insert math expression box	ctrl M
Notes: Insert chemical equation box	ctrl E
Open the Scratchpad	
Lists & Spreadsheet: Recalculate **Program Editor:** Check syntax, store program and paste program name in Calculator (after clearing current line in Calculator) **Python Editor:** Check syntax, save program and execute in Python Shell **Python Shell:** Rerun last program	ctrl R
Geometry/Graphs/Lists & Spreadsheet: Add Function Table **Program Editor/Python Editor and Shell:** Add/remove comment symbol	ctrl T
Group/Ungroup applications on a page	ctrl 4 / ctrl 6

Using the Scratchpad

The Scratchpad is a feature of the TI-Nspire™ CX handheld that lets you quickly:

- Evaluate math expressions.
- Graph functions.

Opening and Closing the Scratchpad

- ▶ From the Home screen, press [scratchpad] to open the Scratchpad.

  The first time you open the Scratchpad, a blank page opens with the Calculator active.

- ▶ Press [scratchpad] to alternate between the Calculate and Graph pages.
- ▶ Press [menu] to see the Scratchpad Calculate or Scratchpad Graph menu. These menus are subsets of the TI-Nspire™ menus for the Calculator and Graphs applications. For complete listings of those menus, see the documentation for those applications.
- ▶ Press [esc] to close the Scratchpad.

Calculating with Scratchpad

From the Scratchpad Calculate page, enter a math expression on the entry line, and then press [enter] to evaluate the expression. Expressions are displayed in standard mathematical notation as you enter them.

Each evaluated expression and result becomes part of the Scratchpad history, displayed above the entry line.

Entering Simple Math Expressions

Note: To enter a negative number, press [(−)] and then type the number.

Suppose you want to evaluate $\frac{2^8 \cdot 43}{12}$

1. Select the entry line in the work area.
2. Type **2** [^] **8** to begin the expression.

   2^8

3. Press ▶ to return the cursor to the baseline, and then complete the expression by typing:
   [×] **43** [÷] **12**

   $2^8 \cdot 43/12$

4. Press [enter] to evaluate the expression.

   The expression is displayed in standard mathematical notation, and the result is displayed on the right side of the page.

   $$\frac{2^8 \cdot 43}{12} \qquad \frac{2752}{3}$$

   Note: You can force a decimal approximation in a result by pressing [ctrl] [enter] instead of [enter].

   Pressing [ctrl] [enter] *forces the approximate result.*

Note: Results formatting can also be adjusted in settings. For more information about customizing settings, see *Configuring Handhelds*.

Inserting Items from the Catalog

You can use the Catalog to insert functions and commands, symbols, and expression templates into the entry line.

1. Press [📖] to open the Catalog. By default, the first tab is displayed, which lists all commands and functions in alphabetical order.
2. If the function you are inserting is visible in the list, select it and press [enter] to insert it.
3. If the function is not visible:
   a) Press a letter key to jump to the entries that begin with that letter.
   b) Press ▼ or ▲ as necessary to highlight the item you are inserting.
   c) Click a numbered tab to list functions by category: math functions, symbols, math templates, library objects, and value for standard measurement units.
   d) Press [enter] to insert the item into the entry line.

Using an Expression Template

Templates help you enter matrices, piecewise functions, systems of equations, integrals, derivatives, products, and other math expressions.

For example, suppose you want to evaluate $\sum_{n=3}^{7}(n)$

1. Press [templates key] to open the Template palette.
2. Select [sum template icon] to insert the algebraic sum template.

   The template appears on the entry line with small blocks representing elements that you can enter. A cursor appears next to one of the elements to show that you can type a value for that element.

$$\sum_{\square=\square}^{\square}(\square)$$

3. Use the arrow keys to move the cursor to each element's position, and type a value or expression for each element.

$$\sum_{n=3}^{7}(n)$$

4. Press enter to evaluate the expression.

$$\sum_{n=3}^{7}(n) \qquad 25$$

Inserting Expressions Using a Wizard

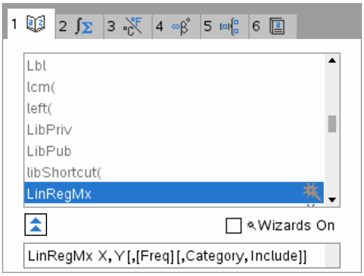
You can use a wizard to simplify entering some expressions. The wizard contains labeled boxes to help you enter the arguments in the expression.

For example, suppose you want to fit a y=mx+b linear regression model to the following two lists:

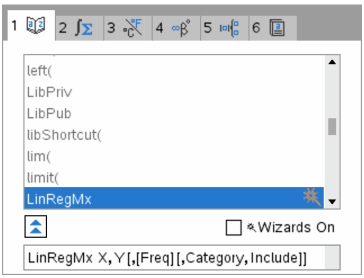
{1,2,3,4,5}
{5,8,11,14,17}

1. Press [catalog key] 1 to open the Catalog and show the alphabetic list of functions.
2. Click inside the list, and then press L to jump to the entries that begin with "L."

3. Press ▼ as necessary to highlight **LinRegMx**.
4. If the **Wizards On** option is not checked, press [tab] [tab] to highlight **Wizards On**.
5. Press [enter] to change the setting.
6. Press [tab] [tab] to highlight **LinRegMx** again.



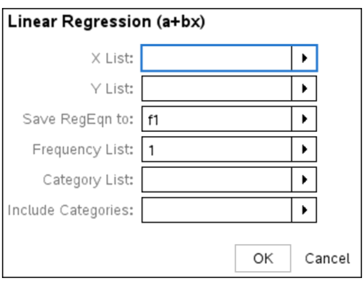
LinRegMx function in a non-CAS or Exact Arithmetic handheld



LinRegMx function in a CAS handheld

7. Press [enter].

   A wizard opens, giving you a labeled box to type each argument.



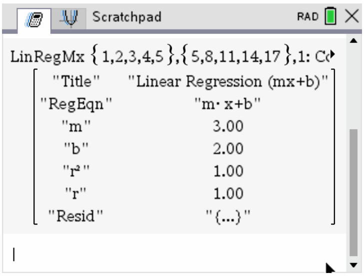
8. Type {**1**,**2**,**3**,**4**,**5**} as **X List**.
9. Press [tab] to move to the **Y List** field.
10. Type **{5,8,11,14,17}** as **Y List**.

11. If you want to store the regression equation in a specific variable, press [tab], and then replace **Save RegEqn To** with the name of the function variable (f1 through f99).
12. Click **OK** to close the wizard and insert the expression into the entry line.

    The expression is inserted along with statements to copy the regression equation and display the variable *stat.results*, which will contain the results.

    LinRegMx {1,2,3,4,5},{5,8,11,14,17},1: CopyVar stat.RegEqn,f1: stat.results

    The Scratchpad then displays the *stat.results* variables.

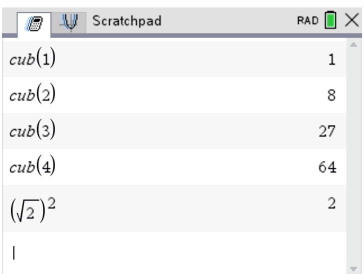


Note: You can copy values from the *stat.results* variables and paste them into the entry line.

Viewing the History

Each evaluated expression and result becomes part of the Scratchpad history, displayed above the entry line.

▶ Press ▲ or ▼ to scroll through the history.



Copying a History Item to the Entry Line

You can quickly copy an expression, subexpression, or result from the history into the entry line.

1. Press ▲ or ▼ to move through the history and select the item that you want to copy.

2. Optionally, select part of the expression or result by using ⇧shift in combination with the arrow keys.

$$\text{approx}\left(\frac{2^8\cdot 12}{42}\right) \qquad 73.1428571429$$

3. Press enter to copy the selection and insert it into the entry line.

$$\sqrt{\frac{2^8\cdot 12}{42}} \qquad \frac{16\cdot\sqrt{14}}{7}$$

Clearing the History

When you clear the history, all variables and functions defined in the history retain their current values. If you clear the history by mistake, use the undo feature.

► From the **Actions** menu, click **Clear History**.

  —or—

  Press menu 1 5.

  All expressions and results are removed from the history.

Editing Scratchpad Expressions

Although you cannot edit a Scratchpad Calculate expression in the history, you can copy all or part of an expression from the history and paste it to the entry line. You can then edit the entry line.

Inserting Elements into the Entry Line

1. Press tab, ◄, ►, ▲, or ▼ to position the cursor in the expression.

   The cursor moves to the closest valid position in the direction that you press.

2. Type the elements or insert them from the Catalog.

Selecting Part of an Expression

You can delete, cut, or copy a selected part of an expression.

1. Press ◄, ►, ▲, or ▼ to move the cursor to a starting point in the expression.

2. Press and hold ⇧shift and press ◄, ►, ▲, or ▼ to select.

   - To delete the selection, press del.
   - To cut the selection to the Clipboard, press ctrl X.
   - To copy the selection to the Clipboard, press ctrl C.

- To paste the selection to a new entry line in Scratchpad, press `ctrl` `V`.

Graphing with the Scratchpad

1. Press to open the Scratchpad Graph page if it is not already open.

   By default, the entry line is displayed. The entry line displays the required format for typing a relation. The default graph type is Function, so the form *f1*(*x*)= is displayed.

   If the entry line is not shown, press **Ctrl + G** or press `menu` `2` `3` to display the entry line and type an expression to graph.

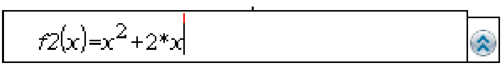
2. Press `menu` > **Graph Entry/Edit** and select a graph type.

   For example:

   - To graph an equation for a circle, press `menu` **> Graph Entry/Edit > Equation > Circle >** $\mathbf{(x\text{-}h)^2 + (y\text{-}k)^2 = r^2}$ or press `menu` `3` `2` `3` `1`. Fill in the equation and press `enter` to draw the circle.
   - To graph a function, press `menu` > **Graph Entry/Edit > Function** or press `menu` `3` `1`.

   The entry line changes to display the expression format for the specified graph type. You can specify multiple relations of each graph type.

3. Type an expression and any other parameters required for the graph type.



4. Press `enter` to graph the relation, or press ▼ to add another relation. If necessary, you can use press `menu` `4` to choose a tool on the **Window/Zoom** menu and adjust the viewing area.

   When you graph the relation, the entry line disappears to show an uncluttered view of the graph. If you select or trace a plot, the relation that defines the plot is displayed on the entry line. You can modify a plot by defining a relation or by selecting and changing the graph.

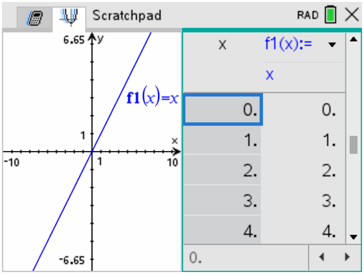
   As you graph multiple plots, the defining relation is displayed for each. You can define and graph a maximum of 99 relations of each type.

5. Use the `menu` key to explore and analyze the relation to:

   - Trace the relation.
   - Find points of interest.
   - Assign a variable in the expression to a slider.

Viewing the Table

- To display a table of values corresponding to the current plots, press menu > **Table > Split-screen Table** (menu 7 1).



- To hide the table, click the graph side of the split screen, and then press menu > **Table > Remove Table** (menu 7 2). You can also press **Ctrl + T**.

- To resize columns, click the table and press menu > **Actions > Resize** (menu 1 1).

- To delete a column, edit an expression, or edit table settings, click the table and press menu > **Table** (menu 2).

Changing the Appearance of the Axes

As you work with graphs, the Cartesian axes are displayed by default. You can change the appearance of the axes in the following ways:

1. Press menu 4 and choose the Zoom tool to use.
2. Select the axes and press ctrl menu 2 to activate the **Attributes** tool.
   a) Press ▲ or ▼ to move to the attribute to change. For example, choose the end style attribute.
   b) Press ◀ or ▶ to choose the style to apply.
   c) Change any other attributes of the axes as required for your work, and then press enter to exit the attributes tool.
3. Adjust the axes scale and tic mark spacing manually.
   a) Click and hold one tick mark, and move it on the axis. The spacing and number of tic marks increases (or decreases) on both axes.
   b) To adjust the scale and tic mark spacing on a single axis, press and hold ⇧shift, and then grab and drag a tic mark on that axis.
4. Change axis end values by double-clicking them and typing new values.
5. Adjust the location of the axes. To move the existing axes without resizing or rescaling them, click in and drag an empty region of the screen until the axes are in the desired location.

6. Change the axes' scales by pressing menu > **Window/Zoom** > **Window Settings** (menu 4 1).

   Type the values of your choice over the current values for x-min, x-max, y-min, y-max, Xscale, and Yscale and click **OK**.

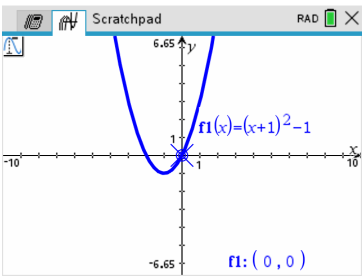
7. Press menu > **View** > **Hide Axes** (menu 2 1) to hide or show the axes.

   - If the axes are shown on the page, selecting this tool hides them.
   - If the axes are hidden on the page, selecting this tool redisplays them.

Tracing a Plot

Graph Trace moves through the points of a graphed function, parametric, polar, sequence, or scatter plot. To enable the trace tool:

1. Press menu > **Trace** > **Graph Trace** (menu 5 1) to move across the plot in Trace mode.



2. (Optional) To change the trace step increment for tracing, press menu 5 3.

   After you type a different step increment, the Graph Trace tool moves across the graph in steps of that size.

3. Use Graph Trace to explore a plot in the following ways:

   - Move to a point and hover to move the trace cursor to that point.
   - Press ◀ or ▶ to move from point to point on the function's graph. The coordinates of each point traced are displayed.
   - Press ▲ or ▼ to move from one plot to another. The point's coordinates update to reflect the new location of the trace. The trace cursor is positioned on the point of the new graph or plot with the closest *x* value to the last point identified on the previously traced function or graph.
   - Type a number and press enter to move the trace cursor to the point on the plot with independent coordinates nearest the typed value.
   - Create a persistent point that remains on the graph by pressing enter when the trace point reaches the point you want to label. The point remains after you exit Graph Trace mode.

Notes:

- The string *undef* is displayed instead of a value when you move over a point that is not defined for the function (a discontinuity).
- When you trace beyond the initially visible graph, the screen pans to show the area being traced.

4. Press [esc] or choose another tool to exit Graph Trace.

Finding Points of Interest

You can use the tools on the **Analyze Graph** menu to find a point of interest in a specified range of any graphed function. Choose a tool to find zero, the minimum or maximum, the point of intersection or inflection, or the numeric derivative (dy/dx) or Integral on the graph.

1. Select the point of interest that you want to find on the **Analyze Graph** menu. For example, to find a zero, press [menu] [6] [1].

	non-CAS and Exact Arithmetic	**CAS**
Zero	[menu] [6] [1]	[menu] [6] [1]
Minimum	[menu] [6] [2]	[menu] [6] [2]
Maximum	[menu] [6] [3]	[menu] [6] [3]
Intersection	[menu] [6] [4]	[menu] [6] [4]
Inflection	Not applicable	[menu] [6] [5]
dy/dx	[menu] [6] [5]	[menu] [6] [6]
Integral	[menu] [6] [6]	[menu] [6] [7]
Analyze Conics	[menu] [6] [7]	[menu] [6] [8]

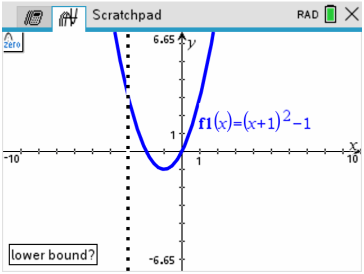
The icon for the selected tool is displayed at the top left on the work area. Point to the icon to view a tooltip about how to use the selected tool.

2. Click the graph you want to search for the point of interest, and then click a second time to indicate where to start the search for the point.

   The second click marks the lower bound of the search region and a dotted line is displayed.

   Note: If you are finding the derivative (dy/dx), click the graph at the point (numeric value) to use for finding the derivative.

3. Press ◀ or ▶ to move the dotted line that marks the search region, and then click the point at which you want to stop the search (upper bound of the search region).



4. Press enter at the point to start the search. The tool shades the range.

   If the search region you specified includes the point of interest, a label for the point is displayed. If you change a graph that has points of interest identified, be sure to check for changes in points of interest. For example, if you edit the function on the entry line or manipulate a plot, the point where the graph intersects zero can change.

   The labeled points of interest remain visible on the graph. You can exit the tool by pressing esc or choosing another tool.

Working with Variables in the Scratchpad

Scratchpad variables are shared between Scratchpad Calculate and Scratchpad Graph, but not with any TI-Nspire™ documents. If you use the same name for a Scratchpad variable and a variable in a document, no conflict occurs unless you attempt to copy expressions between documents and the Scratchpad.

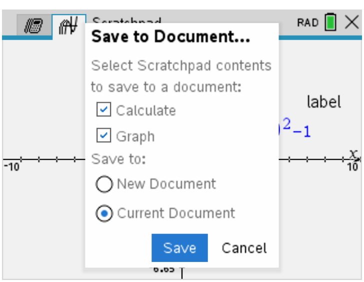
Saving the Scratchpad Contents

You can save the Scratchpad Calculate page, the Scratchpad Graph page, or both as a TI-Nspire™ document.

1. Press doc▾, and then select **Save to Document** (doc▾ A).

2. Press enter.

   The Save to Document dialog box opens.



3. Select the page or pages to save.

4. If a document is open, select either New or Current document.
5. Click **Save**.
   - If you selected to save to a current (open) document, the Scratchpad pages are added to the document.
   - If you selected to save the Scratchpad pages to a new document, the pages are converted to an unsaved document. To save the document:
     - Press [doc▾] **> Save**. The Save As dialog box opens.
     - Type a name for the document.
     - Select **Save** to save the new document.

Clearing Scratchpad Contents

Complete the following steps to delete the calculations and graphing work from the Scratchpad application.

1. Press [doc▾] > **Clear Scratchpad** ([doc▾] [B]).
2. Press [enter] to delete the Scratchpad contents.

Working with Documents on TI-Nspire™ CX II Handhelds

All of the work you do with a TI-Nspire™ CX II handheld is contained in one or more TI-Nspire™ documents, which you can share with other handheld users and with those using the computer software.

- Each document is divided into at least one, and up to 30, problems.
- Each problem contains at least one, and up to 50, pages.
- Each page can be divided into as many as four work areas.
- Each work area can contain any of the TI-Nspire™ applications (Calculator, Graph, Geometry, Lists & Spreadsheet, Data & Statistics, Notes, and Vernier DataQuest™).

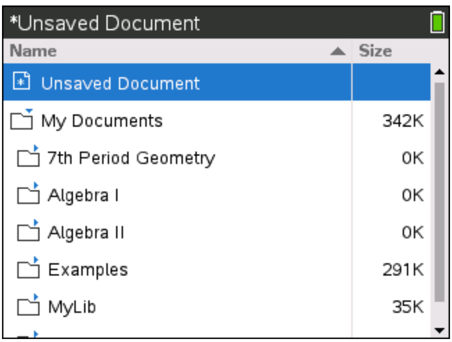
Opening a Document

1. From the Home screen, select Browse.

   —or—

   Press [2].

   The file manager opens.

2. Navigate to the file you want to open.

   - Press ▼ to highlight the document name, and then press [click] or [enter] to open the document.
   - If the file is in a folder, press ▼ to highlight the folder, and then press [click] or [enter] to open the folder.

3. Press [doc▾] to open the Documents menu to access options for working with the open document.

Creating a New Document

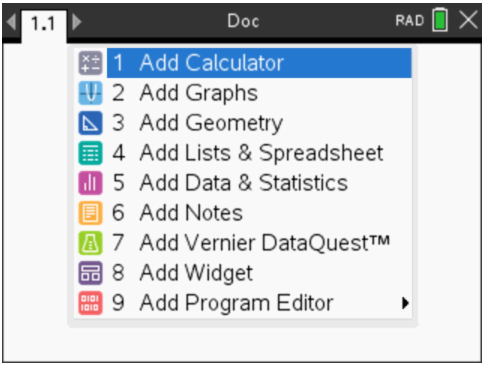
1. From the Home screen, select New.

   —or—

Press [1].

You can also press [ctrl] [N].

A new document opens with a list of applications.



Note: The tab at the top left of the screen indicates that this is the first page of the first problem.

2. Use ▼ and ▲ to highlight the application you want to add to the page, and then press [enter] to open the page.

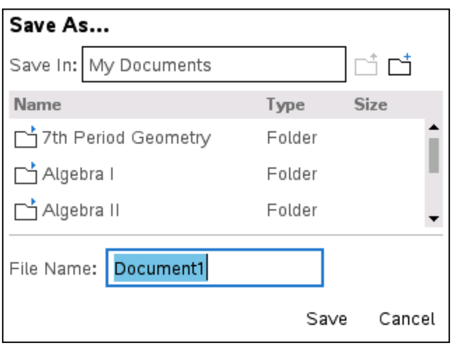
Saving Documents

To save the document in the My Documents folder:

1. Press [doc▾] to open the Documents menu, and then select **File > Save**.

   Note: You can also press [doc▾] [1] [4] or [ctrl] [S] to save a document.

   The Save As dialog box opens.



If you are saving the document for the first time, you will be asked which folder to save it to, and what to name the document. The default folder is My Documents.

2. Type a name for the document.
3. Click **Save** to save the document in the My Documents folder.

Saving a Document in a Different Folder

To save the document in a different folder:

1. From an open document, press [doc▾] [1] [5].

   The Save As dialog box opens.

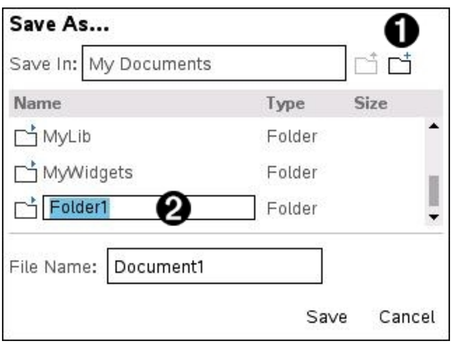
2. Press [⇧shift] [tab] to navigate to the list of existing folders. The first folder in the list is selected.
3. Use the ▼ and ▲ to scroll through the list of folders.
4. To select and open a folder, press [click].
5. Type a name for the document.
6. Click **Save** to save the document in the selected folder.

Saving a Document in a New Folder

To save the document in a new folder:

1. From an open document, press [doc▾] [1] [5].

   The Save As dialog box opens.



❶ New folder icon

❷ Type new folder name

2. Press [tab] until the New Folder icon is highlighted, and then press [enter] to create a new folder.

   The new folder is added to the bottom of the list of existing folders. By default, the folder name is “Folder1.”

3. Type a name for the new folder, and then press enter to save.

4. Press enter again to open the folder.

   The File Name field becomes active.

5. Type a name for the document.

6. Click **Save** to save the document in the new folder.

Working with Applications

Options for working with applications include:

- Creating a new document and selecting an application
- Adding a new page and application to an open document
- Adding multiple applications to a page in a document

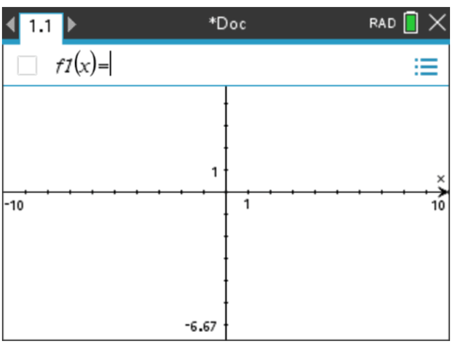
Adding an Application

There are multiple ways to add an application to a page:

- When creating a new document, use the Touchpad or corresponding numbers to select an application from the list of applications.

- To add a new page and application to an open document, press ctrl doc▾ and then select an application from the list.

  For example, press 2 to add the Graph application to the page. The application opens in the work area.



You can also press ⌂on, and then select an application from the Home screen by clicking one of the following application icons:

	Calculator

	Graphs
	Geometry
	Lists & Spreadsheet
	Data & Statistics
	Notes
	Vernier DataQuest™

Using Multiple Applications on a Page

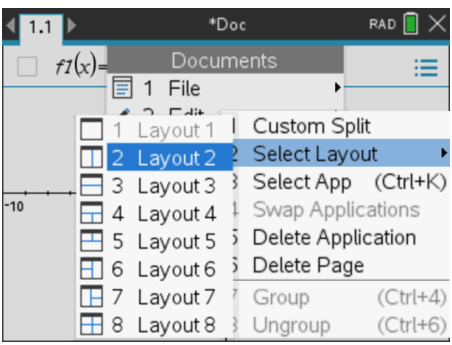
You can add up to four applications to each page.

When you create a new document, it contains space to add one application. If you need to add more than one application to a page, you can change the layout to accommodate as many as four applications.

You can choose a standard layout, provided as a menu item, or you can customize a layout to suit your needs.

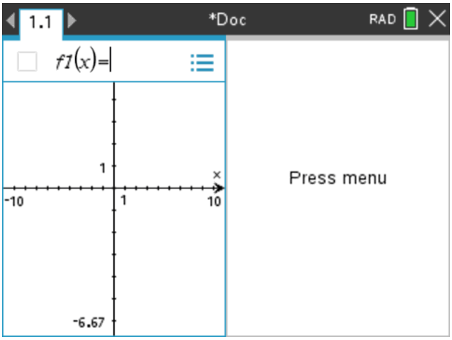
Choosing a Standard Page Layout

1. Press [doc▾] [5] [2] to display layout options.



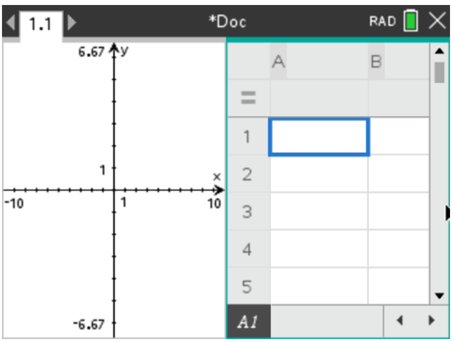
2. Press the number that corresponds to the layout you want.

   For example, press [2] to create a two-pane layout, divided vertically on the page.



3. Press ctrl tab to move between panes. Bold lines around the pane indicate that the pane is active.

4. Press menu, and then press the number of the application you want to add the new pane. For example, press 4 to add the Lists & Spreadsheet application.

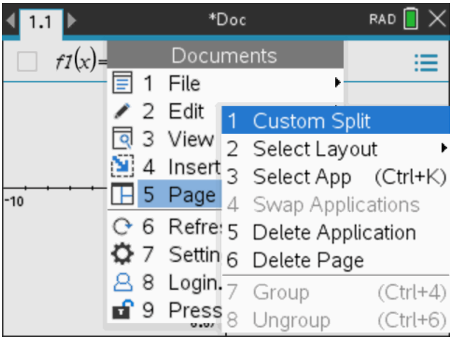


Note: If you need to change the layout of the page to add or delete applications, you can do so at any time. When deleting an application, select the application to be deleted first.

Creating a Custom Page Layout

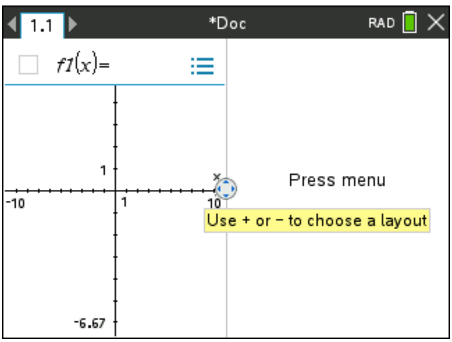
If the standard layouts do not meet your needs, you can customize the space allotted to applications on a page.

1. Press doc▾ 5 to display layout options.



2. Press [1] to select the custom split option.

   The standard layout is displayed with a divider between the application panes. Use the arrows ( ) in the middle of the divider to adjust the size of the panes.



3. Press ▲, ▼, ◀, or ▶ to move the divider to adjust the height or width of the panes in the layout.

4. Press [+] or [−] to select a defined layout:

   - Pressing [−] returns to a full page layout.
   - Pressing [+] once switches layout from a vertical layout to a horizontal layout. Press [−] to go back to a vertical layout.
   - Pressing [+] twice adds a third pane to the page. Pressing [+] multiple times enables you to choose between a vertical and horizontal page layout with three panes.
   - Pressing [+] five times adds a fourth pane to the page. Press [−] to cycle through the previous layout options.

5. Press [click] or [enter] to accept the layout dimensions.

6. Press ctrl tab to move between panes. Bold lines around the pane indicate that the pane is active.

Swapping Applications on a Page

If you want to change the position of applications on a page with multiple applications, you can do so by “swapping“ the positions of two applications.

1. Press doc▾ 5 Page Layout 4 Swap Application.

   The selected application is surrounded by a heavy, flashing black border, and the Swap App cursor is displayed on the screen.

   Note: On a two-pane page layout, the selected application automatically swaps position with the opposite pane. Press or enter to complete the swap.

2. Press ▲, ▼, ◀, or ▶ to position the cursor over the application you are targeting to swap.

3. Press or enter to complete the swap.

   Note: Press esc to cancel the swap.

Grouping Applications

To group up to four application pages into a single page:

1. Select the first page in the series.
2. From the **Document** menu, select **Page Layout > Group**.

   Press doc▾ 5 7.

   The next page is grouped with the first page. The page layout automatically adjusts to display all the pages in the group.

Ungrouping Pages

To ungroup the pages:

1. Select the grouped page.
2. From the **Document** menu, select **Page Layout > Ungroup**.

   —or—

   Press doc▾ 5 8.

   The material becomes individual pages for each application.

Deleting an Application from a Page

1. Click the application you want to delete.
2. From the **Document** menu, select **Page Layout > Delete Application.**

   —or—

Press [doc▾] [5] [5].

The selected application is deleted.

If you want to undo the delete, press **Ctrl-Z**.

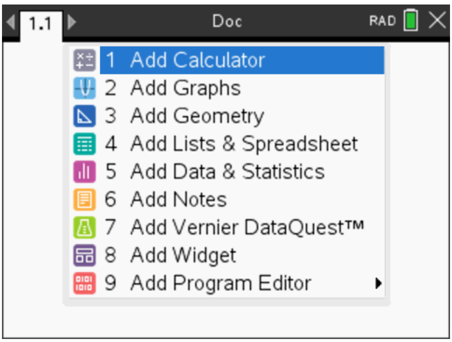
Using the Application Menu

The Application menu enables you to select tools for working with a specific application. Each application has a unique menu.

Using the Application Menu

1. From a blank page, press [menu] to display the Application menu.

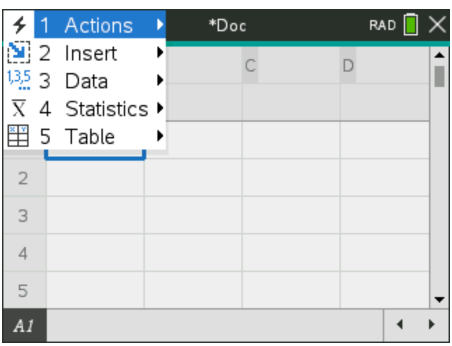
   The menu displays applications that you can add to the page.



2. Press the number of the application you want to add to the page. For example, press [4] to add the Lists & Spreadsheet application.

3. Press [menu] to display the Application menu, which lists the options for working with the current application.

   The example below displays the Application menu for the Lists & Spreadsheet application.



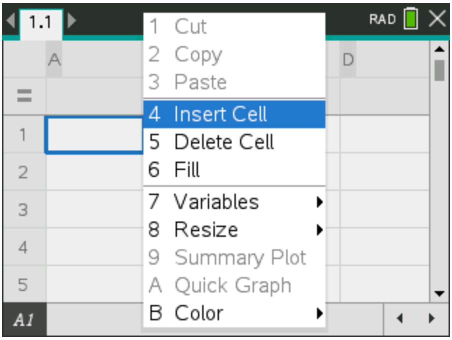
Context Menus

Context menus display options that are specific to the selected object or the current cursor location.

Using the Context Menu

▶ To access a context-sensitive menu from an application, press [ctrl] [menu].

In the example below, the context menu displays options available for the selected cell in Lists & Spreadsheet.



Working with Problems and Pages

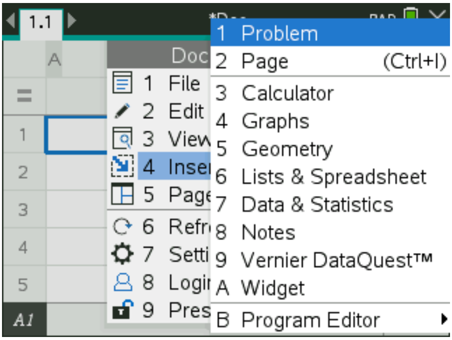
The options on the **Documents** menu let you:

- Save a document
- Access edit functions such as undo, redo, cut, copy, paste, and delete
- Move between pages and open the page sorter view for documents with multiple pages
- Modify page layout, insert pages or problems, delete pages, and change settings
- Add problems, pages, and applications to open documents
- Access page layout options

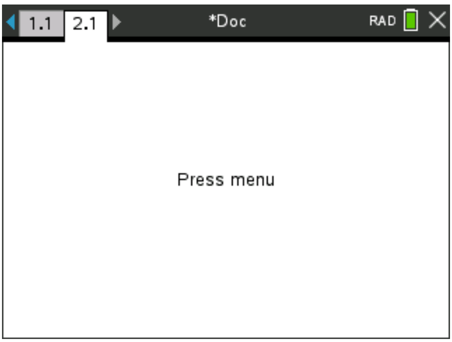
Adding a Problem to a Document

Adding problems to a document enables you to reuse variable names. A document can contain as many as 30 problems. To add a new problem:

1. Press [doc▾] [4] [1] to open the Insert options.



A new problem with one page is added to the document. The tab at the top left of the screen indicates that this is the first page of the second problem.



2. Press [menu] to open the Application menu, and then, press the number corresponding to the application you want to add to the new page.

Viewing and Reordering Pages in a Document

The Page Sorter displays all of the problems in your document and all pages within each problem in thumbnail format. You can use the Page Sorter to rearrange and delete pages, copy a page from one problem and paste it into another, and apply templates to pages.

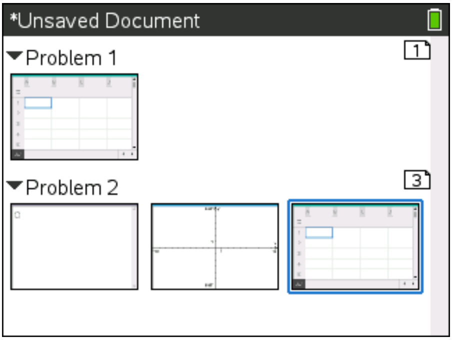
Viewing Multiple Pages with the Page Sorter

Although the handheld typically displays the pages in your document one at a time, the Page Sorter lets you see all of the problems in your document and all pages within each problem in thumbnail format. You can use the Page Sorter to rearrange and delete pages, and copy a page from one problem and paste it in another.

Opening the Page Sorter from a Document

- Press [ctrl] ▲.

The Page Sorter screen displays all of the problems and pages in the current document.

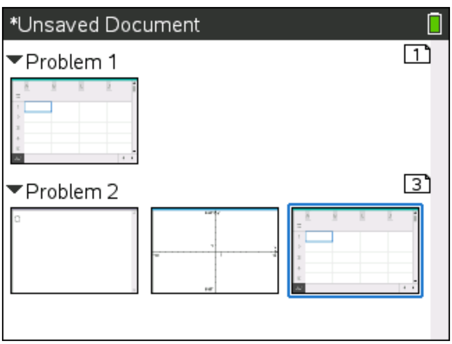


Reordering Pages in a Problem

Use the Page Sorter (press ctrl ▲) to move a page within a problem with multiple pages:

1. Press the ◀ or ▶ key to select the page you want to move.

   A heavy border around the page indicates that it is selected.



2. Either press and hold [click] or press ctrl [click] until the grab cursor is displayed.
3. Press ◀, ▶, ▲, or ▼ to move the page to the desired position.
4. Press [click] or enter to finish the move.

   Note: You can press esc to cancel.

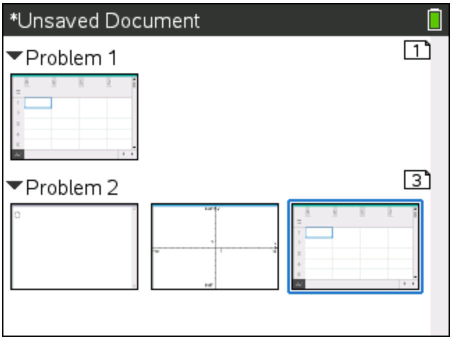
   The page moves to the new location within the problem, and the counter adjusts accordingly.

Copying a Page to Another Problem

To copy a page from one problem to another in the same document:

1. Press ctrl ▲ to open Page Sorter.
2. Press ◀, ▶, ▲, or ▼ to select the page you want to copy.

   A heavy border around the page indicates that it is selected.



3. Press ctrl C to copy the page.
4. Press ◀, ▶, ▲, or ▼ to select the desired position in the problem where you will paste the page. The copied page will be placed after the page you select.
5. Press ctrl V to paste the page in the new location.

   The page is copied to the new location within the problem, and the counter adjusts accordingly.

Note: If the page contains variables with the same names as the new problem, a conflict may occur. Rename the variables if necessary.

Copying a Page to Another Document

To copy a page from one document to another document:

1. Press ctrl ▲ to open the Page Sorter.
2. Press ◀, ▶, ▲, or ▼ to select the page you want to copy.

   A heavy border around the page indicates that it is selected.

3. Press ctrl C to copy the page.
4. Press ⌂on 2 to open My Documents.
5. Press ▲ and ▼ to highlight the folder containing the document you want to copy the page to.
6. Press ▶ to open the folder.

—or—

Press menu 3.

7. Press the ▲ and ▼ keys to highlight the document.
8. Press [click] or enter to open the document.
9. Press ctrl ▲ to display the Page Sorter.
10. Press ◀, ▶, ▲, or ▼ to move the page to the desired position in the document.
11. Press ctrl V to paste the page in the new location.

    The page moves to the new location within the problem, and the counter adjusts accordingly.

Copying, Pasting, and Deleting Problems

You can copy and paste a single problem from one location to another within the same document or a different document. You can also delete a problem from the document.

Copying and Pasting a Problem

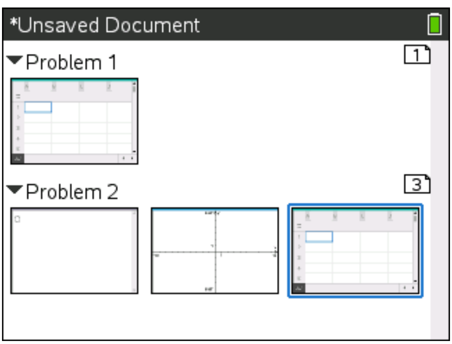
To copy and paste a problem:

1. Open the Page Sorter.

   Press ctrl ▲.

   —or—

   Press doc▾ 3 3.



2. Select the problem. If there are multiple problems, you can press menu 2 to collapse the Page Sorter to list the problems by number and title only.
3. Press ctrl C.
4. Go to the location where you want the problem to appear.

5. Press ctrl V.

   A duplicate problem is placed in the new location.

Deleting a Problem

To delete a problem from the document:

1. Select the problem from the Page Sorter.
2. Press ctrl X.

   The problem is deleted from the document.

Renaming a Problem

To rename a problem:

1. With the document active, open the Page Sorter.

   Press ctrl ▲.

2. Select the problem name.
3. Press ctrl menu.
4. Select 7 **Rename** and type the name.
5. Press ctrl S to save the change.

Adding a Page to a Problem

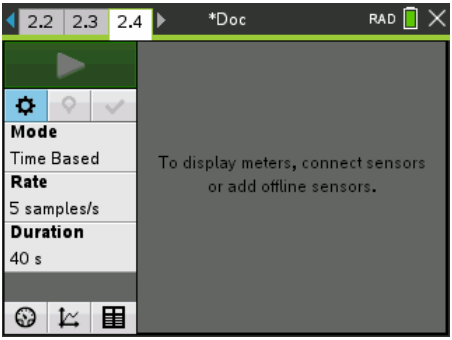
Each problem can contain up to 50 pages. To add a new page to a problem:

- Press ctrl doc▾ or ctrl I to add a blank page and select an application.

  —or—

- Press ⌂on to display the Home screen, and then point to the application you would like to add to the new page and click or tap.

  A new page is added to the current problem.



Note: The tab at the top left of the screen indicates that this is the second page of the second problem.

Moving Through Pages in a Document

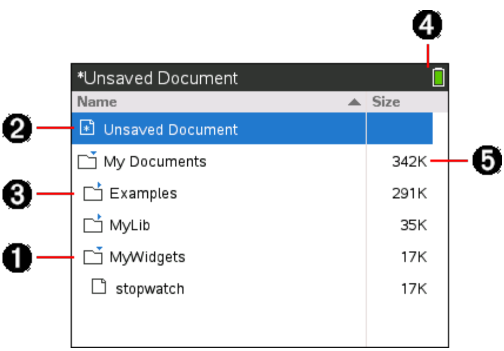
Tabs display up to three multiple pages. When a document contains more than three pages, arrows appear on the left and right of the tabs.

Use the following keys to navigate through your documents.

- ctrl ◀ displays the previous page.
- ctrl ▶ displays the next page.
- ctrl ▲ displays the Page Sorter.
- ctrl ▼ displays the previous view.
- Use the Touchpad to click on the arrows that appear on either side of the tabs to show additional pages in a document containing more than three pages.

Managing Documents

My Documents is a file manager in which you store and organize your documents. The example below illustrates the My Documents screen with its main parts labeled. Following the screen, you can find descriptions of each labeled part.



❶ Expanded folder

❷ Current, unsaved document

❸ Collapsed folder

❹ System status indicators

❺ File size

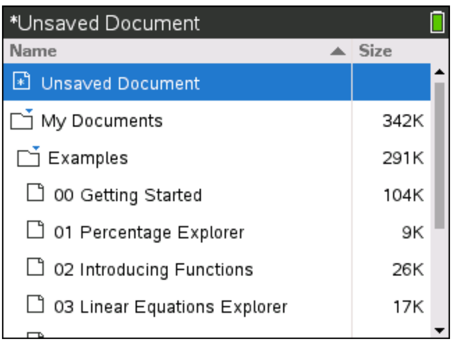
Browsing Files in My Documents

To open **My Documents**:

► Press [⌂ on] [2].

Note: If you are working in a page, press [ctrl] ▲ [ctrl] ▲.

The **My Documents** screen opens, displaying all folders and files on the handheld.

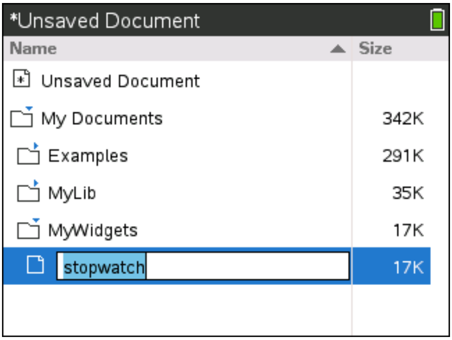


- To sort columns by name or size, click that column head. Click again to change the sort from ascending to descending.
- To scroll through My Documents, click or grab the scroll bar.
- To expand a single folder, point to the folder and click on the folder icon or press [ctrl] ►. To collapse, click again or press [ctrl] ◄.
- To expand all folders, press [menu] [7]. To collapse, press [menu] [8].

Renaming Folders or Documents

To rename a folder or document:

1. Press the ▲ and ▼ keys to highlight the document or folder you want to rename.
2. Press [menu] [2].



The document or folder name is highlighted.

3. Type a new name and press enter to complete the change.

   Note: Press esc to cancel.

Creating Folders

You can create folders two different ways:

- You can create a folder when you save a new document: The **Save** and **Save As** menu commands allow you to enter a new folder name for the document.
- You can create a folder directly from the My Documents screen. Press menu 1. Type a name for new folder, and press [click] or enter to add it.

File and Folder Naming Conventions

Folder names must be unique. File and folder names can be very long, and can include almost all characters, including spaces and punctuation.

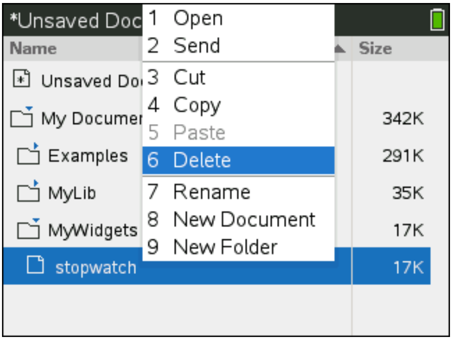
Note: If you are planning to transfer these documents to your computer for use in the TI-Nspire™ software, it is best to use names that are accepted on your computer. Avoid punctuation, \, /, or symbols.

Deleting Documents and Folders

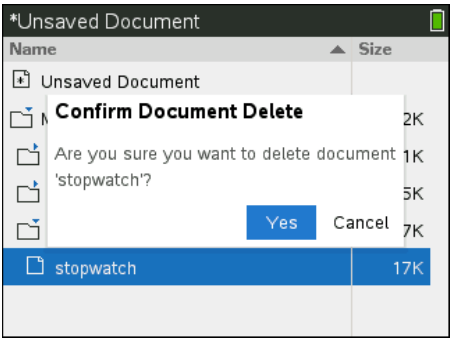
1. Press ▲ and ▼ to highlight the document or folder you want to delete.
2. Press ctrl menu 6.

   —or—

   Press del.



A dialog box opens, confirming that you want to delete the file or folder.



3. Press [click] or [enter] to select **Yes**.

   The document is deleted.

Duplicating Documents and Folders

Use Copy [ctrl] [C] and Paste [ctrl] [V] to duplicate documents and folders.

To copy a document to another folder, select the desired folder, and then paste.

Recovering Deleted Documents

Most operations performed in My Documents can be undone. Press [ctrl] [Z] (Undo) to cancel the last operation until the deleted document is restored.

Closing a Document

1. To close a document, press [doc▾] [1] [3].

   —or—

   Press [ctrl] [W].

If you have changed the document, you will be asked whether you want to save those changes.

2. Click **Yes** to save the document or click **No** to abandon the changes.

Understanding the TI-Nspire™ Tools

This section provides an overview of the tools used when working with TI-Nspire™ documents on a handheld, including variables, catalog, symbols, and math templates.

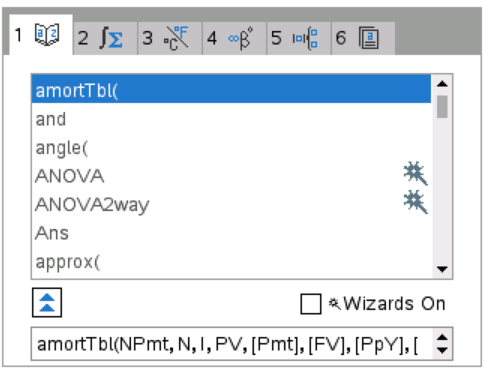
Creating TI-Nspire™ Variables

Variables can be any portion or attribute of an object or function created within an application. Examples of attributes that can become variables are the area of a rectangle, the radius of a circle, the value contained in a spreadsheet cell or the contents of a column, or a function expression. When you create a variable, it is stored in memory within the problem. You will find more information about variables in the chapter titled *Using Variables*.

Using the Catalog

Use the catalog to access a list of TI-Nspire™ commands and functions, units, symbols and expression templates. Commands and functions are listed alphabetically. Commands or functions not beginning with a letter are found at the end of the list (&, /, +, -, and so on). To open the catalog:

1. From an open document, press [catalog key] to open the catalog.



2. Press the number key corresponding to the appropriate tab.

   For example, press [2] to show a list of math functions.

3. Press ▼ until the item you want to insert is highlighted.

   A syntax example for the selected item is displayed at the bottom of the screen.

Note: To see additional syntax examples of the selected item, press tab, and then press enter to maximize or minimize the Help. To move back to the selected item, press shift tab.

4. Press enter to insert the item.

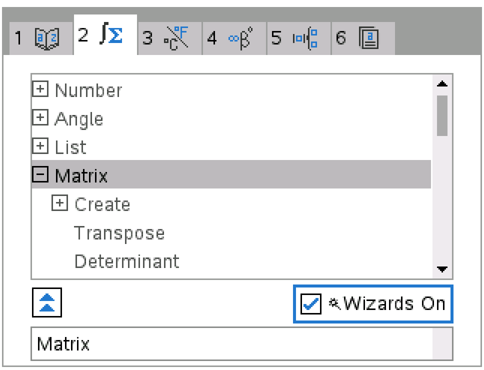
About the Catalog Window

The catalog window uses these tabs to categorize commands, special characters, and templates in documents:

1	Contains all commands and functions, in alphabetical order
2	Contains all math functions
3	Provides the values for standard measurement units
4	Provides a symbol palette for adding special characters
5	Contains math templates for creating two dimensional objects, including product, sum, square root, and integral
6	Shows public library (LibPub) objects.

Using Wizards

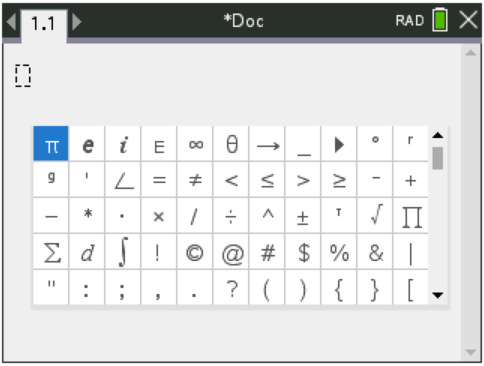
Some catalog functions have a wizard to help you enter function arguments. To use a wizard, press tab until the **Wizards On** box is highlighted. Press or enter to select the check box.



Entering Special Characters

The symbol palette contains a subset of the objects found in the catalog. To open the symbol palette:

1. In an open document, press ctrl .

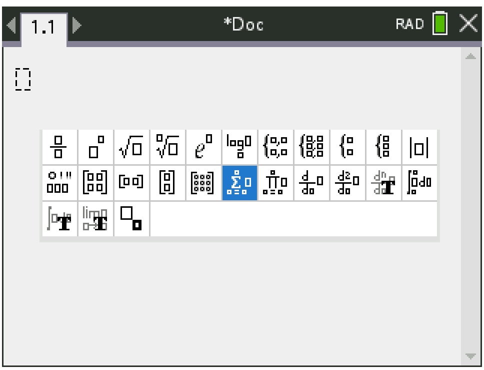


2. Press ◀, ▶, ▲, or ▼ to select a symbol.
3. Press enter to insert the symbol.

Entering Math Expressions

Use math expression templates to create two-dimensional objects such as summation, integral, derivative, and square root. To open the math expressions palette:

1. In an open document, press [templates key].



2. Press ◀, ▶, ▲, or ▼ to select an expression.
3. Press [click key] or enter to insert the expression.

Entering International Language Characters

Use the [flag key] key to enter specially accented or punctuated characters in applications such as Notes that allow text input.

1. Open an application such as Notes that allows text input.
2. Type the desired text.

3. Position the cursor after the letter that you want to accent. For example, “e” while in the French locale.
4. Press ⚐ on the keypad. Notice that the “e" changes to “é.“ Keep pressing ⚐ until you find the accented version of e that you want. Press ␣ or the next letter of your text to accept the character and continue typing.

Working with Images

Images can be used in TI-Nspire™ applications for reference, assessment, and instructional purposes. You can add images to the following TI-Nspire™ applications:

- Graphs & Geometry
- Data & Statistics
- Notes
- Question, including Quick Poll

In the Graphs & Geometry and Data & Statistics applications, images are set in the background behind the axis and other objects. In the Notes and Question applications, the image is set at the cursor location inline with the text (in the foreground).

You can insert the following image file types: .jpg, .png, or .bmp.

Note: The transparency feature of a .png file type is not supported. Transparent backgrounds are displayed as white.

Working with Images on a Handheld

On a handheld, images can be copied from one document to another or resized or repositioned within a document. You can also delete images from a document.

You cannot add or insert images into a document when working on a handheld. However, you can transfer a document containing an image from your computer to a handheld.

Note: If there is not enough storage on the handheld to accommodate a document containing an image, an error message is displayed.

Copying an Image

Complete the following steps to copy an image from one document to another or from one page to another within the same document.

1. Open the document that contains the image you want to copy.
2. Select the image.
   - In the Question or Notes applications, move the cursor over the image and press .
   - In the Graphs & Geometry application, press [menu] [1] [2] [2].
   - In the Data & Statistics application, press [menu] [3] [6].

   A border appears around the image.
3. Press [ctrl] [menu], and then click **Copy**. You can also press [ctrl] [C].
4. Open the document where you want to paste the image or select a page in the current document.

Note: If you open a new document, you will be prompted to save and close the current document.

5. Press ctrl V.

   Note: If pasting an image into the Graphs & Geometry application, press enter, and then press ctrl V.

   The image is copied to the page in the document.

Repositioning an Image

Complete the following steps to reposition an image on a page.

1. Open the document and navigate to the page that contains the image.
2. Select the image.
   - In the Question or Notes applications, move the cursor over the image, and then press, hold, and release [click]. The image appears shaded.
   - In the Graphs & Geometry application, press menu 1 2 2.
   - In the Data & Statistics application, press menu 3 6.

   A border appears around the image.
3. Move the image.
   - In the Question or Notes applications, move the cursor to the new location and press [click].
   - In the Graphs & Geometry or Data & Statistics applications:
     - Press and hold [click] until the cursor changes to a four-sided arrow (✥). The image floats in the background and the border changes to a dashed line.
     - Move your finger over the Touchpad to move the image to the new location, and then press [click] or enter to place the image.

Resizing an Image

Complete the following steps to resize an image on a page.

1. Open the document that contains the image.
2. Select the image.
   - In the Question or Notes applications, or in Quick Poll, move the cursor over the image and press, hold, and then release [click]. The image appears shaded.
   - In the Graphs & Geometry application, press menu 1 2 2.
   - In the Data & Statistics application, press menu 3 6.

   A border appears around the image.
3. Move the cursor to one of the corners.

The cursor changes to a four-sided directional arrow (✥).

Note: If you move the cursor to the edge of an image, the cursor changes to a two-sided directional arrow. You can drag the image left or right to resize it, but the image will become distorted.

4. Press [click].

   The [resize] tool is enabled.

5. Move your finger over the Touchpad in any direction to resize the image.

   A dashed line appears to indicate the new size.

6. To accept the new size, press [click] or [enter].

Deleting an Image

Complete the following steps to remove an image from a page.

1. Open the document that contains the image.
2. Select the image.
   - In the Question or Notes applications, move the cursor over the image, and then press, hold, and release [click]. The image appears shaded.
   - In the Graphs & Geometry application, press [menu] [1] [2] [2].
   - In the Data & Statistics application, press [menu] [3] [6].

     A border appears around the image.

3. Press [ctrl] [menu], and then select **Delete**.

   The image is removed.

   Note: In the Question and Notes applications, you can also press [del] to remove a selected image.

Working in a TI-Nspire™ CX Premium Teacher Software Classroom

If you are in a classroom where TI-Nspire™ CX Premium Teacher Software is used, you will need to log in to class to communicate with the teacher's computer. The teacher can communicate with your handheld in the following ways:

- Send files
- Collect files
- Delete files
- Send Quick Polls and receive Quick Poll responses

The teacher can also pause and restart your handheld. When class is paused, you will receive a message on your handheld. You cannot use your handheld until the teacher releases the handheld from pause mode.

Using Wireless Communication Hardware

Teachers using TI-Nspire™ CX Premium Teacher Software in the classroom can attach wireless cradles and/or network adapters to students' TI-Nspire™ CX handhelds. Those handhelds can then link wirelessly to an access point attached to the teacher's computer.

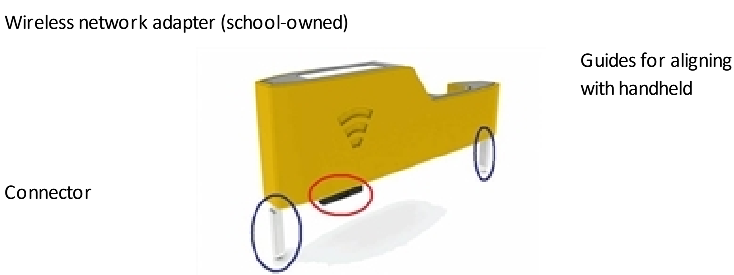
You can attach any the following devices to TI-Nspire™ CX handhelds:

- TI-Nspire™ CX Wireless Network Adapter - v2 (2.4 GHz or 5.0 GHz band)
- TI-Nspire™ Wireless Network Adapter (2.4 GHz)

Attaching a Wireless Adapter to a CX Handheld

Note: The battery in the handheld powers the wireless adapter.

1. Position the wireless adapter on top of the handheld so the connector on the adapter lines up with the connector on top of the handheld.



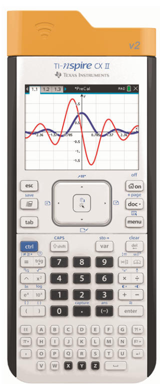
2. Slide the adapter into position, making sure the guides on the sides of the adapter slide into the grooves on the sides of the handheld.

Side view of handheld

Groove to align wireless adapter



3. Firmly press the adapter into place so that the adapter sits on top of the handheld as shown in the following illustration.



Note: The TI-Nspire™ CX handheld can be charged with the wireless adapter attached.

Connecting to the TI-Nspire™ CX Navigator™ System

To connect to the TI-Nspire™ CX Navigator™ network, you must log in to the network from your handheld. Before you can log in, the teacher must complete the following tasks:

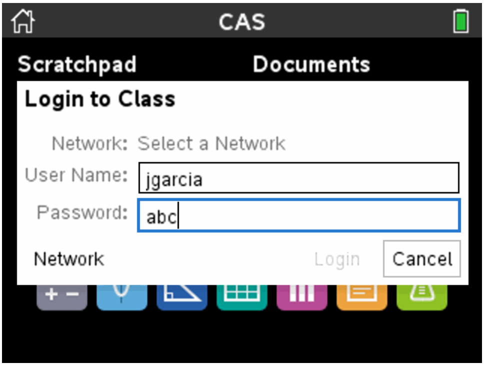
- Start a class session on their computer.
- Provide you with the class network name, a username and, if necessary, a password.

Logging in to the Network

1. Attach a wireless adapter or wireless cradle to the handheld.

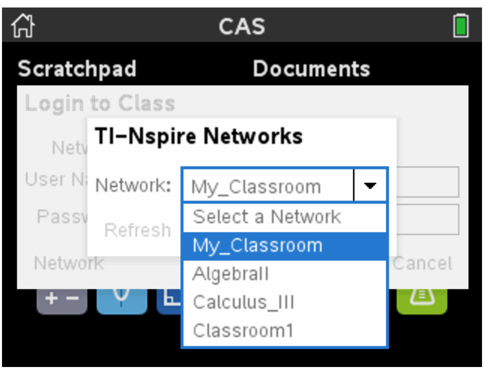
2. Ensure your TI-Nspire™ CX II handheld is ready for login. (The icon is blinking.)
3. Complete one of the following actions:
   - From the Home screen, press [5] [5].
   - From an open document, press [doc▾] [8].

   The Login to Class dialog box opens and the last network that was associated with the wireless client appears.



   Note: If the handheld is connected to the computer with the USB cable, no network names appear on the screen, and you can continue logging in.
4. If the name of the network that appears is correct, click **Login**. If the network is not correct, click **Network.**

   The handheld screens displays the last network the wireless client was attached to, and also displays other networks within range.



5. Select the network from the list, and then click **Connect**.

The login screen shows the connection status and displays the network name when the connection is successful.

6. Type your username and password.
7. Select **Login**.

   The Login Successful screen opens.



8. Click **OK**.

TI-Nspire™ Handheld Login Status Icons

The icons on the TI-Nspire™ CX II and TI-Nspire™ CX II CAS handheld screens indicate the communication status between the handheld and the access point, wireless adapter, wireless cradle, or TI-Navigator™ network. The icons indicate status as follows.

Icon	Status	Meaning
	Blinking	The handheld is searching for an access point.
	Solid	The handheld has found an access point.
	Solid	The handheld is not communicating with the adapter or cradle. Remove the handheld from the adapter or cradle, wait for the icon to disappear, and then reattach the handheld to the adapter or cradle.
	Blinking	The handheld is connected to the network and is ready to login.
	Solid	The handheld is logged in to the network.

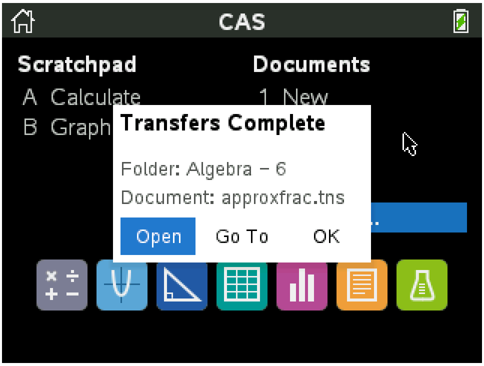
Understanding File Transfers

During a class session, the teacher can send files to student handhelds and collect or delete files from student handhelds.

Note: Before class starts, teachers can set up actions to send or collect files. When you log in, the files are sent or collected. If the teacher set up actions to both send and collect files, you will only see the dialog box for the last action completed.

Opening Sent Files

When the teacher sends a file to your handheld, the Transfers Complete dialog box opens.



- Click **Open** to open the file. If the teacher sent multiple files, this opens the last file in the list.

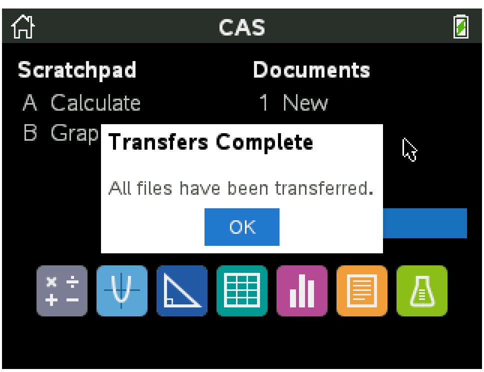
  Note: The files are received alphabetically by name, no matter which order the teacher sent them in. The last file in the list is the last alphabetical file.

- Click **Go To** to go to the location on the handheld where the file was sent. The file name is highlighted. You can open that file, or navigate to another file. If the teacher sent multiple files, the last alphabetical file in the list is highlighted.

- Click **OK** to dismiss the dialog box without opening the file. Your handheld returns to the state it was in when the message was sent.

Collecting or Deleting Files

Your teacher may collect or delete files from your handheld during a class session. For example, teachers can collect homework assignments or delete certain files prior to a test. When the teacher collects or deletes files, you receive a message on your handheld.



- Click **OK** to dismiss the message.

Configuring Handhelds

This chapter provides information needed to:

- Maintain batteries used in the handheld.
- Change the default settings.
- Attach a wireless module when the handheld is used in the classroom.

Checking Battery Status

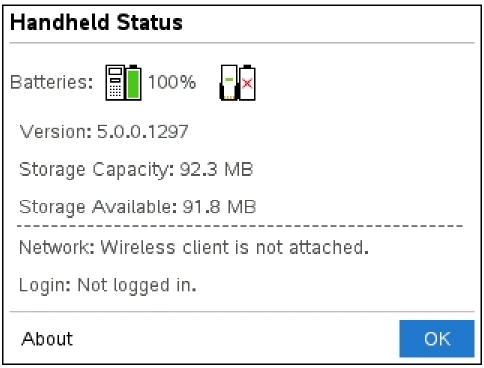
To check the status of the TI-Nspire™ Rechargeable Battery in a handheld:

1. Press [on].

   The **Home** screen opens.

2. Press [5] [4] (**Settings > Status**).

   The **Handheld Status** dialog box opens.



Battery status is shown here.

3. Click **OK** or press [enter] to close the window.

Note: From an open document, press [doc] [7] [4] ([doc] > **Settings & Status > Status**).

Recharging the Handheld

To recharge the TI-Nspire™ Rechargeable Battery in a handheld, connect it to any of the following power sources:

- A standard USB cable connected to a computer
- A TI USB wall charger (sold separately)
- A TI-Nspire™ CX Docking Station if in a classroom setting

The amount of time required to fully charge the battery may vary, but charging normally takes about six hours. It is not necessary to remove the TI-Nspire™ Rechargeable Battery from the handheld to recharge it. The handheld operates normally while it is attached to a charging source.

Recharging a Battery from a Computer

To recharge a handheld from a computer, a TI-Nspire™ USB driver must be installed. USB drivers are standard with any TI-Nspire™ software, which includes:

- TI-Nspire™ CX Premium Teacher Software
- TI-Nspire™ CX CAS Premium Teacher Software
- TI-Nspire™ CX Student Software
- TI-Nspire™ CX CAS Student Software

To download software that includes a driver, go to education.ti.com/software.

Understanding the Priority of Power Sources

When the TI-Nspire™ Rechargeable Battery is fully charged, the handheld draws power in the following order:

- First, from a connected external power source, such as:
  - A computer connected through a standard USB cable
  - An approved wall charger (sold separately)
- Second, from the TI-Nspire™ Rechargeable Battery

Disposing of Used Batteries Safely and Properly

Do not mutilate, puncture or dispose of batteries in fire. The batteries can burst or explode, releasing hazardous chemicals. Discard used batteries according to local regulations.

Changing Handheld Settings

Use the options on the Settings menu to change or view the following settings:

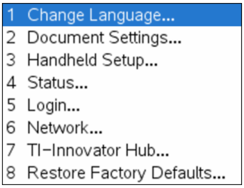
- Change language
- Settings (Document and Graphs & Geometry)
  - Define or restore settings for open documents and the Scratchpad
  - Define or restore default settings for the handheld
- Handheld Setup
- Status
- Login

Note: Not all options are accessible at all times. Options that are unavailable are disabled.

Opening the Settings Menu

▶ From the Home screen, press [5] or use the Touchpad to select Settings.

The Settings menu opens.



Changing a Preferred Language

Complete the following steps to change a preferred language:

1. From the Home screen, press [5] or select **Settings** to open the menu.
2. From the menu, select **Change Language** or press [1].

   The Change Language dialog box opens.



3. Press ▶ to open the drop-down list.
4. Press ▼ to highlight a language, then press [click] or [enter] to select it.
5. Press [tab] to highlight the **OK** button, and then press [click] or [enter] to save the language selection.

Customizing the Handheld Setup

Handheld setup options enable you to customize options to suit your needs.

- Font size (small, medium or large).
- Power standby. (1, 3, 5, 10 or 30 minutes).
  - Use this option to extend battery life.
  - By default, the handheld automatically powers down after three minutes of inactivity.
- Hibernate (1, 2, 3, 4, 5 days or never).
  - Use this option to extend battery life.
  - When hibernating, the handheld saves current work in memory.

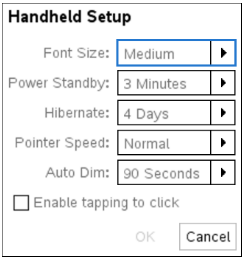
- When you turn the handheld on again, the system reboots and opens saved work.

- Pointer speed (slow, normal or fast).
- Auto dim (30, 60 or 90 seconds, and two or five minutes).
- Enable tapping to click.

Changing Handheld Setup Options

1. From the **Home** screen, press 5 3 (**Settings > Handheld Setup**).

   The Handheld Setup dialog box opens.



2. Press tab until the desired category is highlighted.
3. Press ▶ to view the list of possible settings.
4. Press ▼ to highlight the desired setting.
5. Press or enter to select the new setting.
6. When you have changed all the settings to suit your needs, press tab until **OK** is highlighted, then press or enter to apply your changes.

Customizing Document Settings

Document settings control how the handheld displays and interprets information in TI-Nspire™ documents and in Scratchpad. All numbers, including elements of matrices and lists, are displayed according to the document settings. You can change the default settings at anytime and you can also specify settings for a particular document.

Document settings and their possible values are listed in the following table.

Field	**Values**
Display Digits	• Float • Float1 - Float12 • Fix0 - Fix12
Angle	• Radian • Degree

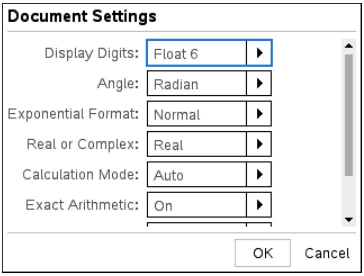
Field	Values
	• Gradian
Exponential Format	• Normal • Scientific • Engineering
Real or Complex	• Real • Rectangular • Polar
Calculation Mode	• Auto • Exact • Approximate **Note:** Auto mode shows an answer that is not a whole number as a fraction except when a decimal is used in the problem. Exact mode (CAS only) shows an answer that is not a whole number as a fraction or in symbolic form, except when a decimal is used in the problem.
Exact Arithmetic	• On • Off **Note:** This option is only available on Exact Arithmetic handhelds.
CAS Mode	• On • Exact Arithmetic • Off **Note:** This option is only available on CAS handhelds and software.
Vector Format	• Rectangular • Cylindrical • Spherical
Base	• Decimal • Hex • Binary
Unit System	• SI • Eng/US **Note:** This option is only available on CAS handhelds and software.

Changing Default Document Settings

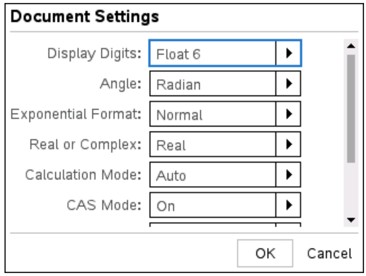
Complete the following steps to define default document settings for TI-Nspire™ documents and Scratchpad.

1. Save and close any open documents.
2. From the Home screen, press [5] [2] (**Settings > Document Settings**).

   The Document Settings dialog box opens.



Exact Arithmetic OS



CAS OS

3. Press [tab] to move through the list of settings. Press ▲ to move backward through the list.

   A bold line around a box indicates it is active.

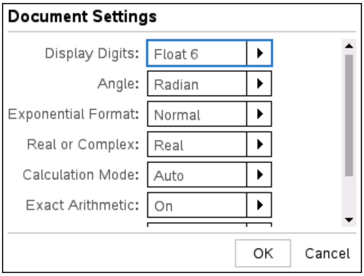
4. Press ▶ to open the drop-down list to view the values for each setting.
5. Press the ▲ and ▼ keys to highlight the desired option, then press [click] or [enter] to select the value.
6. Click **OK** to save the settings as default settings that will be applied to all new TI-Nspire™ documents and to Scratchpad.

Changing Document Settings in a TI-Nspire™ Document

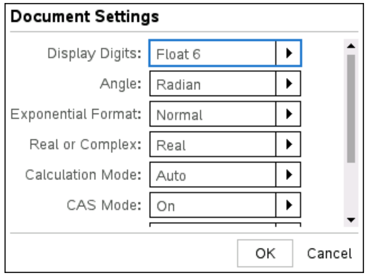
Complete the following steps to change document settings for an open TI-Nspire™ document. The settings will also be applied to Scratchpad and used as the default for all new documents.

1. From an open document, press [on] [5] [2] ([on] **> Settings > Document Settings**).

   The Document Settings dialog box opens.



Exact Arithmetic OS



CAS OS

2. Press tab to move through the list of settings. Press ▲ to move backward through the list.

   A bold line around a box indicates it is active.

3. When you reach the desired setting, press ▶ to open the drop-down list to view values for each setting.

4. Press the ▲ and ▼ keys to highlight the desired option, then press or enter to select the value.

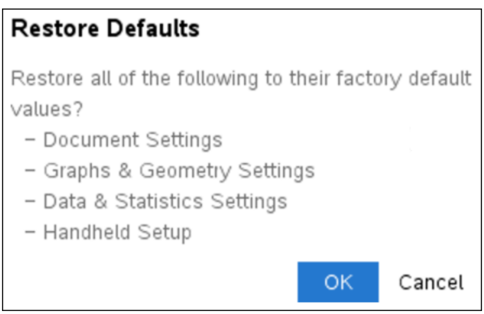
5. Click **OK** or press or enter to apply the new settings to the open document, and to set as the default for new documents and Scratchpad.

Restoring Document Settings

Complete the following steps to restore the original factory settings to open or new documents, and to the Scratchpad.

1. From the Home screen, press 5 8 (**Settings > Restore Factory Defaults**).

   The Restore Defaults dialog box opens.



2. Click **OK** to restore settings to the factory default settings.

3. Press esc or click **Cancel** to return to the **Home** screen without making changes.

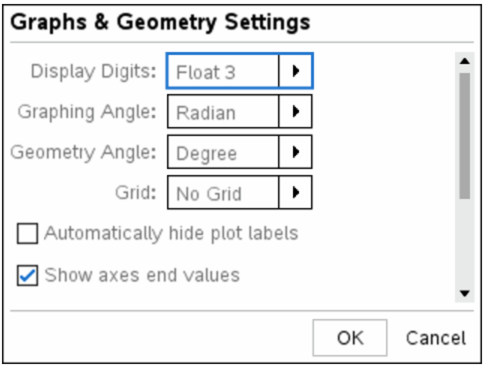
Customizing Graphs & Geometry Settings

Graphs & Geometry settings control how information is displayed in open problems and in subsequent new problems. When you customize application settings, your selections become the default settings for all of your work in the Graphs and Geometry applications.

Complete the following steps to change the Graphs & Geometry Settings and make these settings the default for all new graphs and geometry documents and Scratchpad.

1. Open a document with the Graphs or Geometry application active.
2. Press [menu] [9] ([menu] **> Settings**).

   The Graphs & Geometry Settings dialog box opens.



3. Press [tab] to move through the list of settings. Click ▶ to open the drop-down list to view the values for each setting.

Field	**Values**
Display Digits	Auto
	Float
	Float1 - Float12
	Fix0 - Fix12
Graphing Angle	Auto
	Radian
	Degree
	Gradian
Geometry Angle	Auto
	Radian
	Degree
	Gradian
Grid	No Grid

Field	Values
	Dot Grid Lined Grid

4. Press ▼ to view the values, then press [click] or [enter] to select a value.

5. In the lower half of the dialog, select a checkbox to enable an option or clear a checkbox to disable an option.

Checkbox	Operation when selected
Automatically hide plot labels	Plot labels display only when a plot is hovered, selected or grabbed.
Show axis end values	Displays a numeric label at the least and greatest values visible on an axis.
Show tool tips for function manipulation	Shows helpful information as you manipulate function graphs.
Automatically find points of interest	Shows zeros, minima and maxima for graphed functions and objects while tracing function graphs.
Force geometric triangle angles to integers	Restricts the angles of a triangle to integer values as you create or edit the triangle. This setting applies only in the Geometry View with the Geometry Angle unit set to Degree or Gradian. It does not apply to analytic triangles in Graphing View or to analytic triangles in the Analytic Window of the Geometry View. This setting does not affect existing angles, and it does not apply when constructing a triangle based on previously inserted points. By default, this setting is deselected.
label points	Applies labels (A, B, ..., Z, A_1, B_1, and so on) to points, lines, and vertices of geometric shapes as you draw them. The labeling sequence starts at A for each page in a document. By default, this setting is deselected. **Note:** If you create a new object that uses existing unlabeled points, those point are not automatically labeled in the completed object.

6. Choose one of the following options:

- To apply the settings to the open document only, click **OK**.
- Click **Cancel** to close the dialog box without making changes.

Viewing Handheld Status

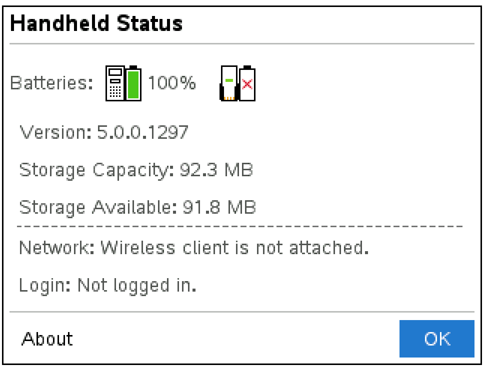
The Handheld Status screen provides the following information about the current state of the handheld:

- Battery status for the rechargeable batteries
- Software version
- Storage capacity and amount of storage available
- Network (if any)
- Your student login name and whether you are logged in
- About

Opening the Handheld Status Screen

1. From the Home screen, press [5] [4] (**Settings > Status**).

   The Handheld Status screen opens.



2. Click **OK** to close the Handheld Status screen.

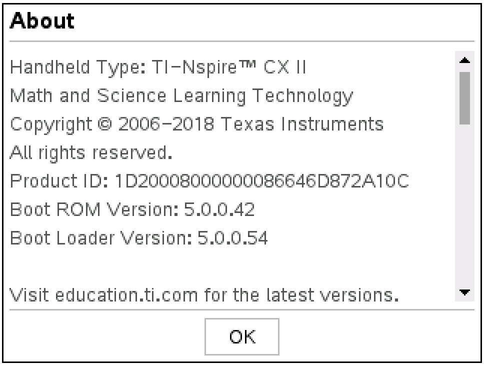
Viewing Handheld Details

The About screen provides additional information about the handheld type, the operating system (OS) version, and the product ID.

1. From the Home screen, press [5] [4] (**Settings > Status**).

   The **Handheld Status** screen opens.

2. Click **About** to view details about the handheld.



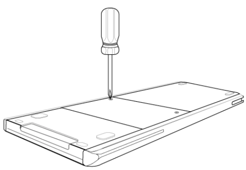
3. Click **OK** to close the About dialog box.
4. Click **OK** to return to the Home screen.

Replacing TI-Nspire™ Rechargeable Batteries

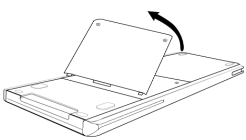
When you replace the battery, complete the following steps to insert the TI-Nspire™ Rechargeable Battery into a handheld.

Note: Your handheld may not exactly match these illustrations.

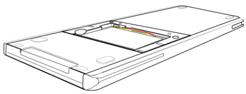
1. Use a small screwdriver to release the panel from the back of the handheld.



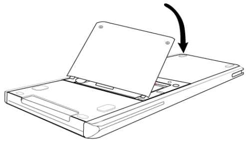
2. Remove the panel.



3. Remove the old battery.
4. Insert the rechargeable battery into its compartment.



5. Replace the back panel and fasten it with a screwdriver.



Precautions for Rechargeable Batteries

- Do not expose batteries to temperatures above 140°F (60°C).
- Do not disassemble or mistreat batteries.
- Use only the charger recommended for the cell or battery, or the one that was provided with the original equipment.
- TI recommends that you use the USB cable included with this calculator. If you choose to use a third-party power adapter with the TI-supplied USB cable, you should use an adapter that meets applicable safety and operational standards and certifications, including UL and CE certifications.

Take these precautions when replacing rechargeable batteries:

- Replace only with a TI approved battery.
- Remove the cell or battery from the charger or alternating current adapter when not in use or being charged.
- Use of the battery in other devices may result in personal injury or damage to equipment or property.
- Do not mix brands (or types within brands) of batteries. There is a risk of explosion if a battery is replaced by the wrong type.

Disposing of Batteries

Do not mutilate, puncture, or dispose of batteries in fire. The batteries can burst or explode, releasing hazardous chemicals. Discard used batteries according to local regulations.

Connecting Handhelds and Transferring Files

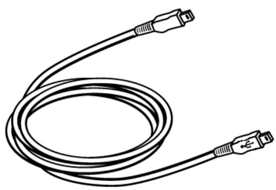
This chapter describes how to connect one TI-Nspire™ CX II handheld to another, how to connect handhelds to a computer, and how to transfer files between them.

The TI-Nspire™ handhelds have a USB port that enables connectivity with another TI-Nspire™ handheld or with a computer.

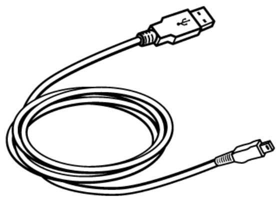
For web-based connectivity using your TI-Nspire™ CX II with a Chromebook, Windows® computer, or Mac® computer, go to TI-Nspire™ CX II Connect.

Connecting Handhelds

You can use USB cables to connect two TI-Nspire™ handhelds or to connect a TI-Nspire™ handheld to a computer.

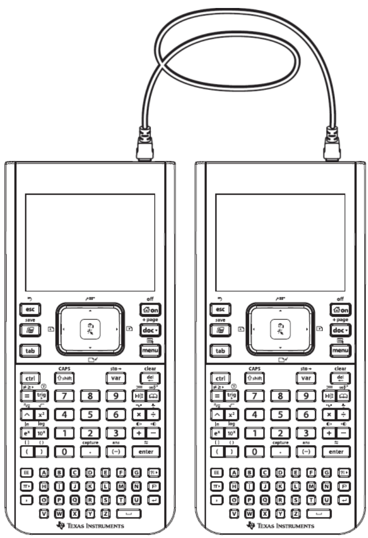


TI-Nspire™ handheld mini-USB cable to connect two TI-Nspire™ handhelds.



TI-Nspire™ USB connection cable to connect the handheld to a computer.

Connecting Two TI-Nspire™ Handhelds with the Mini-USB Cable



The USB port is located on the top of the TI-Nspire™ CX II handheld on the right side when holding the handheld with the screen facing you.

1. Firmly insert either end of the mini-USB cable into the USB port.

2. Insert the other end of the cable into the receiving handhelds's USB port.

Connecting the TI-Nspire™ Handheld to a Computer

1. Firmly insert the mini-USB end of the cable into the port at the top of your handheld.
2. Firmly insert the USB end of the cable into the USB port of the computer.

Transferring Files between Handhelds

You can send documents, Operating System (OS) files, and folders to another TI-Nspire™ handheld.

Note: TI-Nspire™ CX handhelds must be running v4.5.1 or later of the OS in order to transfer to or from TI-Nspire™ CX II handhelds.

Rules for Transferring Files and Folders

- You can transfer documents and OS files.
- Operating systems are not interchangeable between different handheld types. For example, you cannot transfer a CAS operating system to a non-CAS handheld.
- If a document with the same name as the one you are sending already exists on the receiving handheld, the document will be renamed. The system appends a number to the name to make it unique. For example, if Mydata existed on the receiving handheld, it would be renamed Mydata(2).

  Both the sending and receiving handhelds will display a message that shows the new name.
- There is a 255-character maximum length for a file name, including the entire path. If a transmitted file has the same name as an existing file on the receiving handheld and the file names contain 255 characters, the name of the transmitted file will be truncated to enable the software to follow the renaming scheme described in the previous paragraph.
- All variables associated with the document being transmitted are transferred with the document.
- Transmissions will time out after 30 seconds.

Caution: Some older TI-Nspire™ handhelds cannot receive folders; only files. If you receive an error in sending to an older TI-Nspire™ handheld, see *Common error and notification messages*.

Sending a Document or Folder to Another Handheld

1. Ensure the two handhelds are connected.
2. Open the My Documents file browser and navigate to the file or folder you want to transfer.
3. Press the ▲ and ▼ keys on the Touchpad to highlight the document or folder you want to send.
4. Press [doc▾] [1] [6] to select **Send** from the Documents menu.

5. The file transfer begins. A progress bar shows the status of the transfer. There is also a cancel button in the Sending... dialog box to enable you to cancel the transmission while it is in progress.

   At the end of a successful transmission, the message "<Folder / File name> transferred as <Folder / File name>." is displayed. If the file had to be renamed on the receiving handheld, the message will show the new file name.

Receiving a Document or Folder

No action is required by the user of the receiving TI-Nspire™ handheld. Handhelds are automatically powered on when the cable is attached.

At the end of a successful transmission, the message "<Folder / File name> received." is displayed. If the file had to be renamed, the message will show the new file name.

Caution: Some older TI-Nspire™ handhelds cannot receive folders; only files. If you receive an error in sending to an older TI-Nspire™ handheld, see *Common error and notification messages*.

Canceling a Transfer

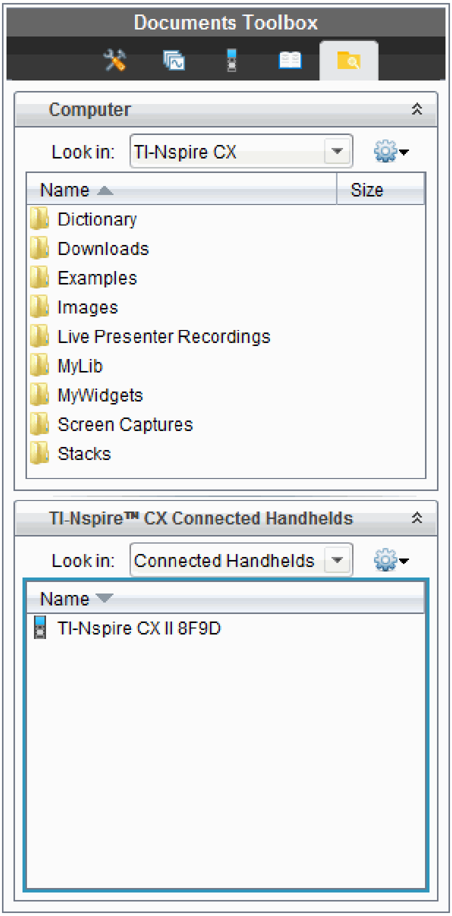
1. To cancel a transmission in progress, press **Cancel** on the sending handheld. The user of either handheld can also press esc.
2. Press esc or enter to cancel the transmission error message.

Transferring Files between Computers and Handhelds

In the Documents Workspace, teachers and students can use the "drag and drop" method to quickly transfer files and folders from a computer to a handheld or transfer files from a handheld to a computer.

Note: You must be running v5.0 or later of the TI-Nspire™ software in order to transfer to or from TI-Nspire™ CX II handhelds.

1. Connect the handheld to the computer using a standard A to mini-B USB cable.
2. In the TI-Nspire™ software, open the Documents Workspace.
3. In the Documents Toolbox, click to open the Content Explorer.



Computer panel

Connected Handhelds

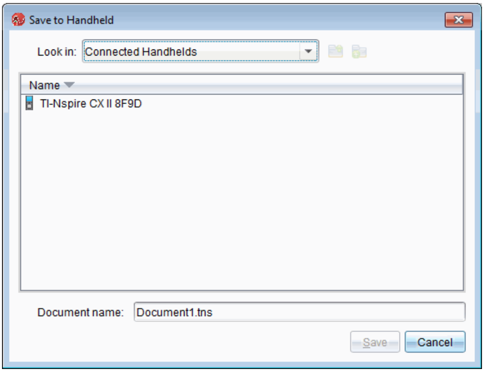
4. Navigate to the folder that contains the file you want to transfer.
   - To transfer a file from a handheld to the computer, click the file, and then drag the file to a folder in the Computer panel.
   - To transfer a file from the computer to a handheld, click the file, and then drag the file to a connected handheld.

Note: Those using the TI-Nspire™ CX Premium Teacher Software or the TI-Nspire™ CX Navigator™ Teacher Software can also use options in the Content Workspace to transfer files from a handheld to a computer.

Using the Save to Handheld Option

In the Documents Workspace, you can also use the Save to Handheld option on the File menu to transfer a file to a connected handheld when you want to save a file to a specific folder on the handheld.

1. Ensure the handheld is connected to the computer.
2. In the Computer panel, navigate to the folder where the file is located.
3. Click the file.
4. Click **File > Save to Handheld**. The Save to Handheld dialog box opens.



5. Double-click the handheld name, and then navigate to the folder where you want to save the file.
6. Click **Save**. The file is saved to the selected folder and the Save to Handheld dialog box closes.

Handling Errors Resulting from Sending Folders

If you receive an error after attempting to send a file, it may mean the receiving handheld has an operating system that does not support the transfer. To resolve this, update the receiving handheld's OS and try the send again.

Common Error and Notification Messages

Shown on	Message and Description
Sending handheld	**"This folder structure is not supported on the receiving handheld. The receiving handheld's OS may need to be updated, which you can do by selecting Send OS from the My Documents menu."** **OK**
	If you get an error when sending a folder to an older TI-Nspire™ handheld, try updating the OS on the receiving handheld. If the error persists, you may have to send the files individually.

Shown on	Message and Description
Sending handheld	**"Transfer failed. Check cable and try again."** **OK**
	This message is displayed if a cable is not attached to the sending handheld's link port. Remove and then reinsert the cable and try the document transmission again. Click **OK** to cancel the transmission message. **Note:** The sending handheld may not always display this message. Instead, it may remain BUSY until you cancel the transmission.
Sending handheld	**"Receiver does not have enough storage space for file transfer."** **OK**
	This message indicates that the receiving handheld does not have enough storage to accept the file being transmitted. The user of the receiving handheld must free space to obtain the new file. To do this: • Delete unneeded files. • Store files on a computer for later retrieval, and then delete them from the TI-Nspire™ handheld.
Sending handheld	**"<folder>/<filename> transferred as <folder>/<filename(#)."**
	This message is displayed at the end of a successful transfer when the file had to be renamed because a file already exists on the receiving handheld with the original name. The transmitted file is renamed by appending a number to the end of the name. Rename numbering always begins with (2) and can increment by one, as needed.
Sending handheld	**"<folder>/<filename> transferred as <folder>/<new filename>."**
	This message indicates that a new folder was created on the receiving handheld to contain the transmitted document.
Receiving handheld	**"<folder>/<filename(x)> received."**
	This message indicates that the receiving handheld has a document with the same name as the document being sent.
Receiving handheld	**"<new folder>/<new filename> received."**
	This message indicates that a new folder has been created to contain the transmitted document.
Receiving handheld	**"Transfer failed. Check cable and try again."** **OK**
	This message indicates that the cable is not correctly attached to the receiving handheld's link port. Remove the cable then reattach it and try the transmission again.

Shown on	Message and Description
	Click **OK** to cancel the transmission message.

File Management

The TI-Nspire™ CX II Handheld comes equipped with 128 MB of Flash storage. The operating system uses part of that storage, and saving new documents on the handheld further reduces the amount of available storage over time. To avoid or resolve storage space issues, use one of the following options:

- Delete documents and folders you no longer use.
- Back up files and folders to another handheld or computer.
- Reset the storage, which deletes ALL files and folders on the handheld.

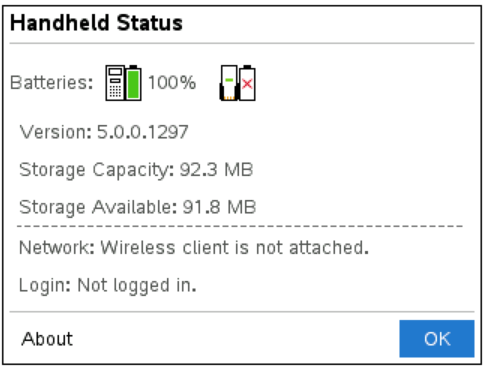
Checking Available Storage

Complete the following steps to view the amount of storage (in bytes) that is available on your handheld.

1. From the Home screen, select **Status** from the **Settings** menu.

   Press [⌂ on] [5] [4].

   The Handheld Status window opens.

2. View the **Storage Available** field to determine how much storage is available on the handheld.
3. Click **OK** to return to the Home screen.

Freeing Storage

To free or recover storage, delete documents and/or folders from the handheld. To keep the documents and folders for later use, transfer them to another handheld or to a computer using the TI-Nspire™ software.

Deleting Files from the Handheld

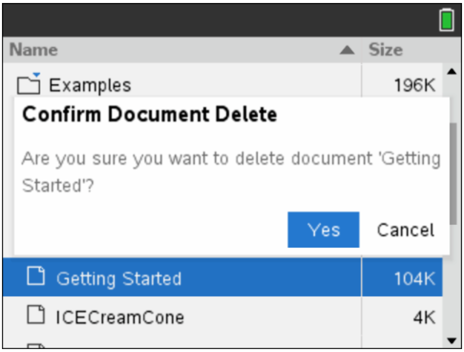
1. Press [⌂ on] [2] to open the **My Documents** file browser.
2. Press ▲ or ▼ to select the folder or document you want to delete.

3. Press del.

—or—

Press ctrl menu 6.

A dialog box opens, asking you to confirm the deletion.



4. Press enter to confirm or esc to cancel.

The folder/document is permanently removed from the handheld.

Backing up Files to Another Handheld

1. Connect the two handhelds using the USB-to-USB connectivity cable.
2. Press on 2 to open **My Documents** on the sending handheld.
3. Press the ▲ and ▼ keys to highlight the document you want to send.
4. Press menu, and then select **Send**.

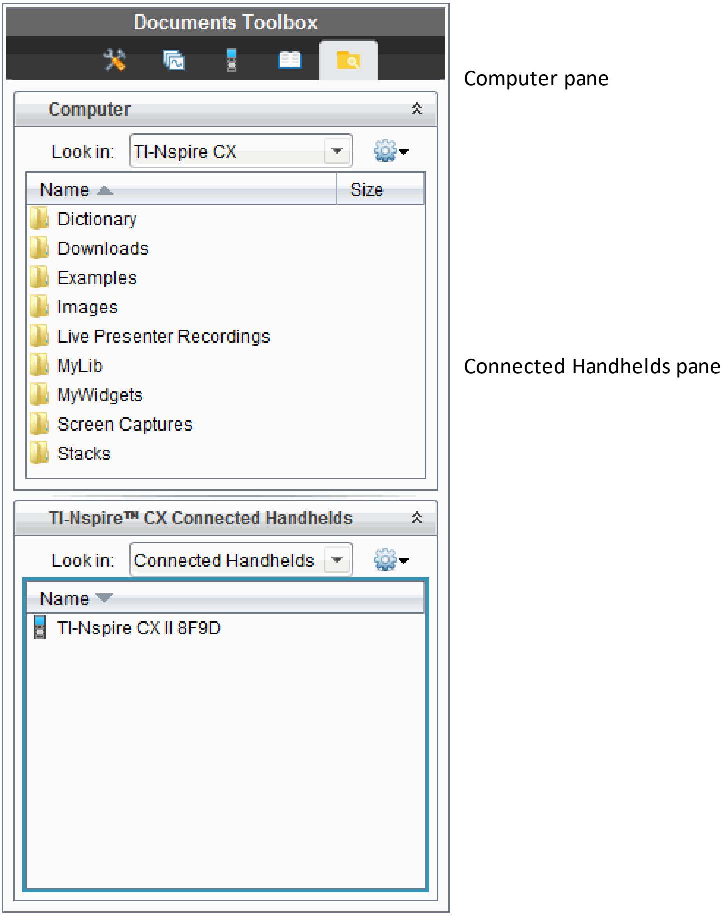
   —or—

   Press ctrl menu 2.
5. When the file transfer is complete, a message is displayed on the receiving unit.

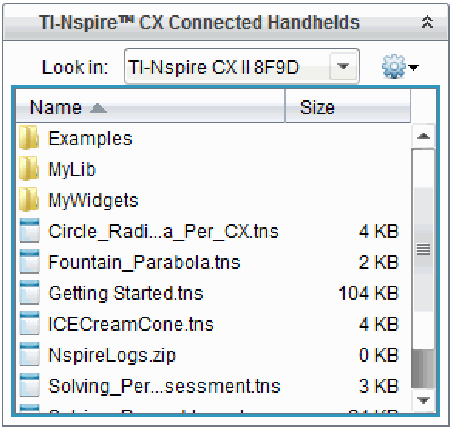
Transferring Files to a Computer

Use the TI-Nspire™ software to transfer files and folders from a handheld to a computer.

1. Connect your handheld to the computer using a standard A to mini-B USB cable.
2. In the TI-Nspire™ software, open the Documents Workspace.
3. In the Documents Toolbox, click to open the Content Explorer.



4. In the Computer pane, navigate to the folder in which you want to save the files.
5. In the Connected Handhelds pane, double-click the handheld name to view the folders and files on the handheld.



6. Select the file or folder you want to save to the computer.
   - Click the file to select one file or folder at a time.
   - To select all files on the handheld, select the first file in the list, hold down the **Shift** key, and then click the last file or folder in the list.
   - To select random files, click the first file, and then hold the **Ctrl** key while selecting additional files.

   Note: If you select multiple files, it is saved as lesson bundle (.tilb file).

7. Drag the files to the folder in the Computer pane.

   —or—

   Select **File > Save as**.

   The files are copied to the folder on the computer.

8. Verify that the files you need are available on your computer, and then delete the files from the handheld.

Note: Those using the TI-Nspire™ CX Premium Teacher Software or the TI-Nspire™ CX Navigator™ Teacher Software can also use options in the Content Workspace to copy files from a handheld to a computer.

Resetting the Storage

Complete these steps only if you want to delete ALL files and folders on your handheld.

WARNING: This action clears the copy/paste clipboard, clears Scratchpad, and deletes all user-created files and folders from the handheld. You cannot undo this operation. Before proceeding, consider restoring sufficient available storage by deleting only selected data.

1. After making certain you want to clear all files, press ⌂ on 2 to open the **My Documents** file browser.
2. Press menu to open the context menu.
3. Select **Delete All**.
   —or—
   Press C.

   The Delete All dialog box opens.

4. Click **OK** to confirm that you want to clear the handheld storage.

Updating the Handheld Operating System

To take advantage of the latest handheld features and updates, download the latest operating system files from the Education Technology website (education.ti.com). You can update the operating system (OS) on TI-Nspire™ handhelds using a computer and the following software:

- TI-Nspire™ CX Premium Teacher Software (v5.0 and later)
- TI-Nspire™ CX Student Software (v5.0 and later)
- TI-Nspire™ CX CAS Premium Teacher Software (v5.0 and later)
- TI-Nspire™ CX CAS Student Software (v5.0 and later)
- TI-Nspire™ CX Navigator™ Teacher Software
- TI-Nspire™ CX CAS Navigator™ Teacher Software

In the classroom, you can use the TI-Nspire™ Docking Stations to upgrade the OS on multiple handhelds at the same time.

You can also transfer the OS from one TI-Nspire™ handheld to another or from one TI-Nspire™ CX II handheld to another. However, handheld operating systems are not interchangeable. You cannot transfer an Exact Arithmetic or CAS operating system to a non-Exact Arithmetic or non-CAS handheld and you cannot transfer a TI-Nspire™ handheld operating system to a TI-Nspire™ CX II handheld.

For web-based connectivity using your TI-Nspire™ CX II with a Chromebook, Windows® computer, or Mac® computer, go to TI-Nspire™ CX II Connect.

What You Need to Know

- If there is not enough room on the receiving handheld for the upgrade, a message is displayed. For more information, see *File Management*.
- OS upgrade operations do not delete user documents. The only time documents are affected by an OS installation is if the receiving handheld has a corrupted OS. In this situation, documents may be affected by OS restoration. It is a good practice to back up important documents and folders before installing an updated operating system.

Before You Begin

Before beginning an OS download, ensure that batteries are at least 25 percent charged.

▶ To check the status of the rechargeable battery in TI-Nspire™ CX II handhelds, press [on] [5] [4] to open the **Handheld Status** dialog box.

When in OS download mode, the Automatic Power Down™ (APD™) feature does not function. If you leave your handheld in download mode for an extended time before you begin the downloading process, your batteries may become depleted. You will then need to replace or recharge the batteries before downloading the OS.

Finding Operating System Updates

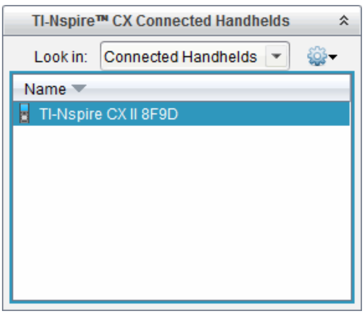
For up-to-date information about available OS upgrades, check the Texas Instruments website at education.ti.com.

You can download an OS upgrade from the Texas Instruments website to a computer, and use a USB cable to install the OS on your TI-Nspire™ CX II handheld. You will need an Internet connection and the appropriate USB cable to download the updates.

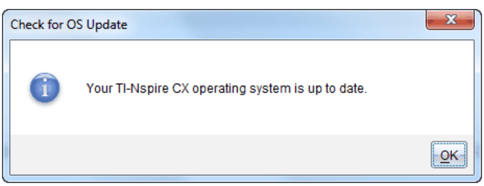
Checking for Handheld OS Updates

When using TI-Nspire™ software, you can quickly determine if your handheld OS is up to date when the handheld is connected to a computer.

1. Open the TI-Nspire™ software and ensure the handheld is connected to your computer.
2. In the Documents Workspace, click to open Content Explorer.
3. In the Connected Handhelds pane, select a connected handheld.



4. Select **Help > Check for Handheld OS Update**.
    - If the operating system is current, the Check for Handheld OS Update dialog box opens indicating that the operating system on the handheld is up to date.



    - If the operating system is not current, the dialog box contains a message indicating that a new version of the operating system is available.
5. Click **OK** to close the dialog box.

Performing the OS Update

In the TI-Nspire™ software, you can select to upgrade the operating system on a connected handheld from the following workspaces and menus:

- In all versions of the software, you can select **Help > Check for Handheld/Lab Cradle OS Update**. Select a connected handheld in the Content Explorer to activate this option. If the OS on the handheld is not current, the dialog box indicates that there is an updated version of the operating system. Follow the prompts to update the operating system.
- In all versions of the TI-Nspire™ software, you can use options available in the Documents Workspace:
  - Open Content Explorer, select the handheld name, and then click  and select **Install OS**.

    —or—

  - Select **Tools > Install Handheld/Lab Cradle OS**.
- Those using teacher versions of the TI-Nspire™ software can use options available in the Content Workspace:
  - In the Resources pane, right-click the name of a connected handheld, and then select **Install Handheld/Lab Cradle OS**.

    —or—

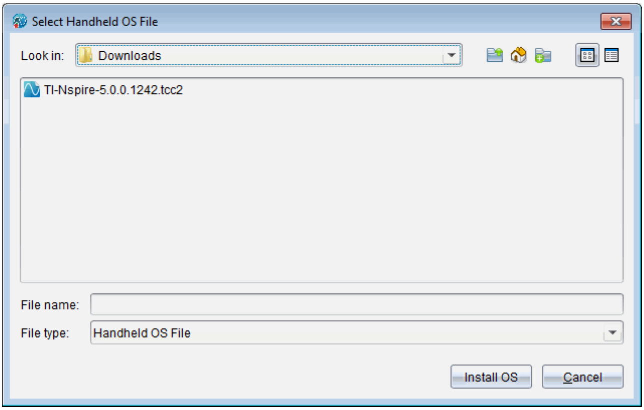
  - Select the handheld name in the Preview pane, click  in the Preview pane, and then select **Install Handheld/Lab Cradle OS**.

    —or—

  - Right-click the handheld name and select **Install Handheld OS/Lab Cradle OS**.

Completing the OS Upgrade

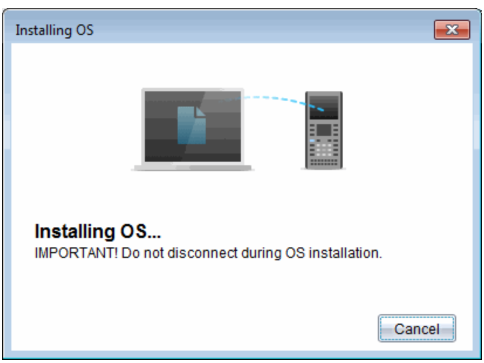
When you select to update the OS on a handheld, the Select Handheld OS File dialog box opens.



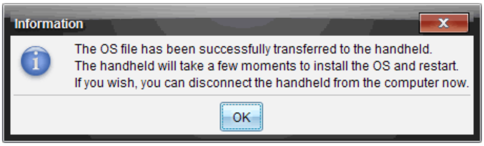
The file displayed for selection defaults to the file type required for the selected handheld.

1. Select the OS file:
   - If you are upgrading a TI-Nspire™ CX II handheld, select TI-Nspire.tco2
   - If you are upgrading a TI-Nspire™ CX II CAS handheld, select TI-Nspire.tcc2
   - If you are upgrading a TI-Nspire™ CX II-T (Exact Arithmetic) handheld, select TI-Nspire.tct2
2. Click **Install OS** to download the OS and update the handheld. The confirmation message “*You are about to upgrade your handheld operating system. Any unsaved data will be lost. Do you want to continue*?” is displayed.
3. Click **Yes** to continue.

   The Installing OS dialog box opens indicating the progress of the download. Do not disconnect the handheld.



4. When the download is complete, the Information dialog box opens indicating that the OS file has been successfully transferred to the handheld. You can disconnect the handheld.



5. Click **OK**.

   The updated operating system is installed on the handheld. When the update is complete, the handheld reboots.

6. On the handheld, follow the prompts to:

   - Choose a preferred language.
   - Select a preferred font size.

7. When the Welcome screen opens, click **OK**.

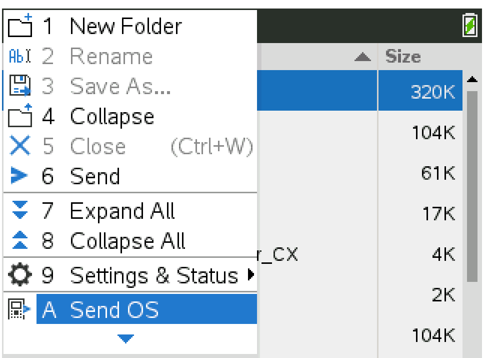
   The Home screen opens.

Transferring the Operating System From Another Handheld

Note: You cannot transfer the OS on a TI-Nspire™ handheld to a TI-Nspire™ CX II handheld and you cannot transfer the OS on an Exact Arithmetic or CAS handheld to a non-Exact Arithmetic or non-CAS handheld. The operating systems are not the same and are not interchangeable.

To transfer the OS from one handheld to another:

1. Ensure any open documents on the receiving handheld are closed.
2. Connect the two handhelds using a USB mini-A to mini-B USB cable.
3. On the sending handheld, select Browse from the Home screen.
4. Press [menu], and then select **Send OS**.
   On a TI-Nspire™ handheld, press (menu).



5. On the receiving handheld, the message, "*You are receiving an OS Upgrade. Unsaved changes will be lost. Would you like to continue?*" is displayed along with Yes and No response buttons. Select Yes to receive the OS upgrade.
   - If **Yes** is not selected within 30 seconds, the handheld automatically responds with No, and the transmission is cancelled.
   - It is important to save and close all open documents before performing an OS Upgrade. Continuing with an OS Upgrade on a handheld with an open, unsaved document will cause the loss of that data.
6. While the upgrade is in progress, the following messages are displayed on the receiving and sending handhelds:
   - "*Receiving OS. Do not unplug cable.*"
   - "*Sending OS. Do not unplug cable.*"
7. After the transfer completes, the sending handheld receives a completion message and you can unhook the cable. The OS is automatically installed on the receiving handheld. During the installation process, the "*Installing OS <version number>*" message is displayed on the receiving handheld.
8. When the installation is complete, the "*OS <version number> has been installed. Handheld will now restart.*" message is displayed. The restart is initiated. If the sending handheld is still attached to the cable, the successful transmission message remains displayed on that handheld's screen.

Important:

- For each receiving handheld, remember to back up information as necessary and install new batteries.
- Be sure the sending handheld is on the **Send OS** screen.

Updating the OS on Multiple Handhelds

In the classroom, use the TI-Nspire™ CX Docking Station to upgrade the OS on multiple handhelds at the same time.

In the teacher versions of the TI-Nspire™ software, you can transfer files from the computer to multiple handhelds from the Content Workspace. See *Using the Content Workspace* for more information about transferring files to connected handhelds.

OS Upgrade Messages

This section lists the information and error messages that can be displayed on handhelds during an OS Upgrade.

Shown on:	**Message and Description**
Sending handheld	**"Receiver does not have enough storage space. Make <xxxK> available."**
	This message indicates that the receiving handheld does not have enough storage available for the new OS. The space requirement is shown so you know how much storage must be cleared for the new operating system. Files

Shown on:	Message and Description
	can be moved to a computer for storage to free the necessary space.
Sending handheld	**"Receiver must change batteries before upgrading the OS."**
	This message indicates that the batteries in the receiving handheld need to be replaced. Send the OS Upgrade once the batteries are replaced.
Sending handheld	**"Receiver has a newer OS and cannot load this OS."** **OK**
	This message indicates that the receiving handheld has a newer OS version than the one being transmitted. You cannot downgrade an OS.
Sending handheld	**"Upgrade not accepted by receiver."** **OK**
	This message indicates that the receiving handheld refuses the upgrade.
Sending handheld	**"OS has been transferred. You can now unplug."** **OK**
	This message indicates that the transfer is complete and it is safe to unplug the cable from the sending handheld.
Sending handheld	**"Sending OS. Do not unplug cable."**
	This message, along with a progress bar, is displayed while the OS Upgrade is being transferred.
Both handhelds	**"Transfer failed. Check cable and try again."** **OK**
	The sending and/or receiving handheld is not properly connected. Reinsert the cable into each handheld, and then try the transmission again.
Receiving handheld	**"You are receiving an OS Upgrade. Unsaved changes will be lost. Would you like to continue?"** **Yes No**
	This message is displayed when an OS Upgrade is about to begin. If you do not select Yes within 30 seconds, the system automatically responds with No.
Receiving handheld	**"Receiving OS. Do not unplug cable."**
	This message, along with a progress bar, is displayed while the OS Upgrade is being transferred.
Receiving handheld	**"Installing OS."**
	This message is displayed when the transfer is complete. It is shown to keep you informed of the handheld's status.
Receiving	**"OS has been installed. Handheld will restart."**

Shown on:	Message and Description
handheld	**OK**
	This information message displays briefly before the handheld automatically reboots.
Receiving handheld	**"Install was corrupted. Handheld will reboot. You will need to retry OS upgrade."** **OK**
	An error occurred during the transmission and the installation was corrupted. The handheld will reboot. After the reboot, reinstall the OS Upgrade.

TI-Nspire™ CX II Connect

TI-Nspire™ CX II Connect is an web-based application that provides connectivity between a computer and a TI-Nspire™ CX II graphing calculator. It allows you to capture the calculator screen, transfer .tns files to and from the calculator, and update the OS on the calculator.

System Requirements

- Browser
  - Google Chrome version 90 or later
  - Microsoft Edge version 90 or later
- Computer
  - Chromebook
  - Windows® 10
  - Mac® OS 10.15 or later
- Active internet connection
- Web USB enabled
- Access to shared memory, files, and clipboard

Supported Calculators

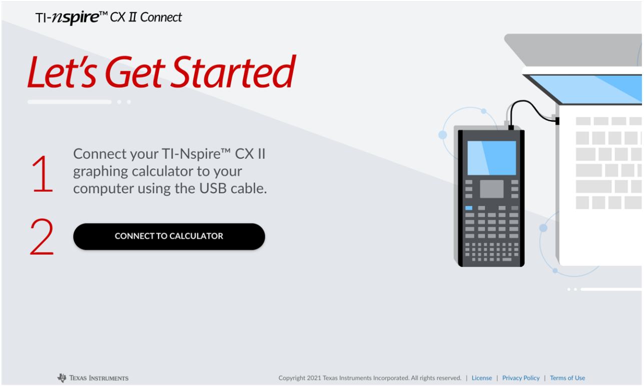
- TI-Nspire™ CX II
- TI-Nspire™ CX II CAS
- TI-Nspire™ CX II-T
- TI-Nspire™ CX II-T CAS
- TI-Nspire™ CX II-C CAS

Getting Started with TI-Nspire™ CX II Connect

1. Open a compatible browser.
2. Enter **nspireconnect.ti.com** into the address bar.

   If prompted, click **Agree and Proceed** to accept cookies, and then click **ACCEPT** button to agree with the TI terms and conditions.

   A compatibility check will be performed while the application loads. If any issues are found, a page will display with information on what needs to be addressed.

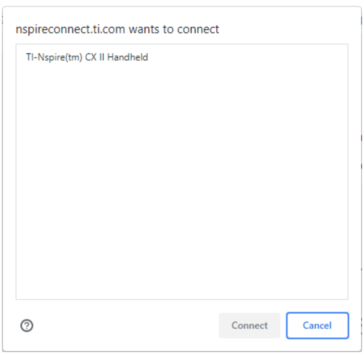


3. After the Let's Get Started page loads, connect your TI-Nspire™ CX II calculator to your computer.

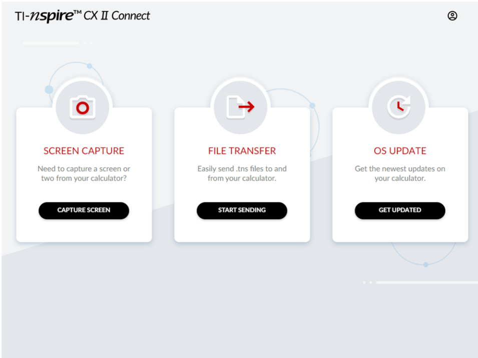
   Note: If your computer only has a USB-C port, you will need a USB-A to USB-C adapter to connect your calculator.

4. Click **CONNECT TO CALCULATOR**.

5. On the popup window, click the name of your calculator and then click **Connect**.



The home page will open displaying the three available options: Screen Capture, File Transfer, and OS Update.



Navigating on the website

There are two ways to navigate on the TI-Nspire™ CX II Connect website after connecting your calculator:

- TI-Nspire™ CX II Connect logo on the top left of each page which links to the home page
- Links to each function on the top right of each page except the home and Let's Get Started pages

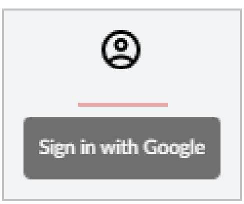
Note: If your calculator is disconnected and then reconnected (or you connect another calculator), you will be redirected to the Let's Get Started page.

Using Google Drive

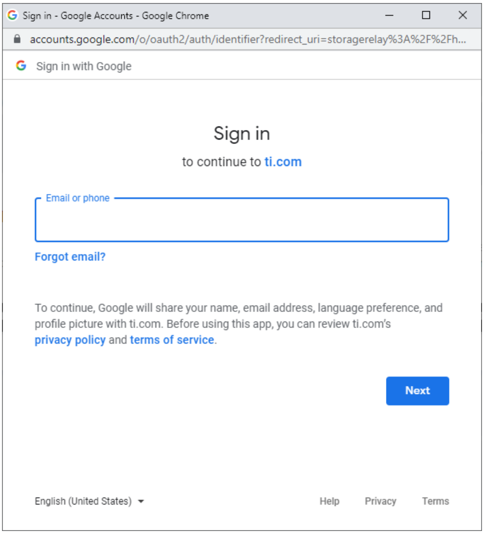
Note: This feature is optional. TI does not save any of your user data if you sign in with Google.

To use your Google Drive account to save screenshots or transfer tns files:

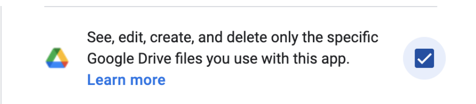
1. Click the **Sign in with Google** icon on the top right part of any page.



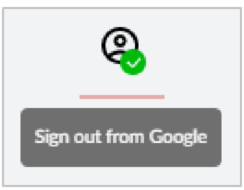
2. On the **Sign in with Google** popup window, complete the sign in process to connect to Google Drive.



3. When prompted on the standard Google Account dialog, select the checkbox for the option to grant the application access to your Google Drive for transferring files to or from your computer.



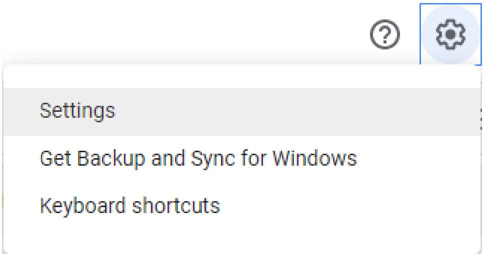
After signing successfully, the sign in icon will have a green checkmark and can then be used to sign out of your Google Drive account.



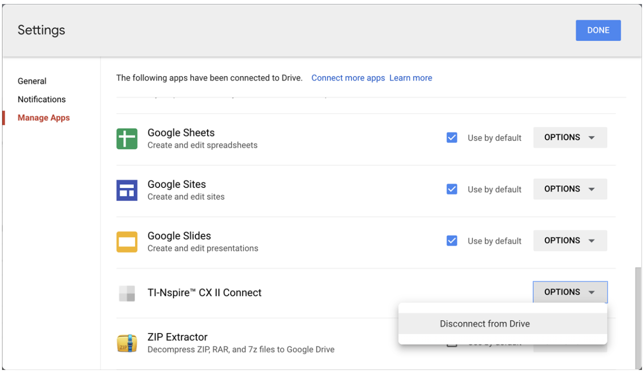
Note: When using Google Drive for screen captures or file transfers, you must create the folder(s) you want to use in Google Drive first.

Disconnecting TI-Nspire™ CX II Connect from Google Drive

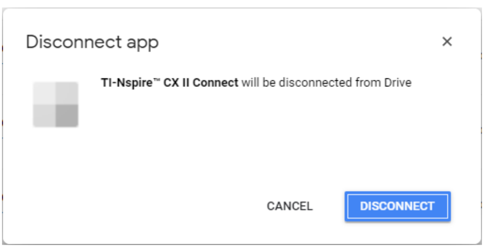
1. In Google Drive, click the settings icon and select **Settings**.



2. On the **Settings** dialog, click **Manage Apps**.
3. Locate the TI-Nspire CX II Connect app in the list and then click **OPTIONS > Disconnect from Drive**.



4. On the confirmation dialog, click **DISCONNECT**.



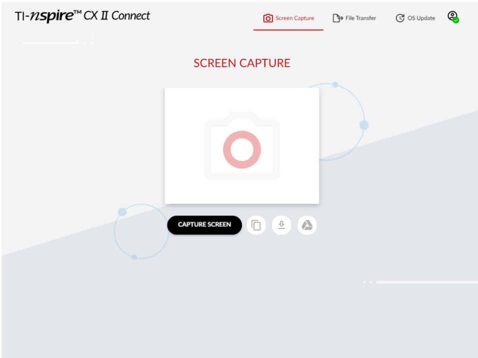
The TI-Nspire™ CX II Connect app will be removed from the list.

5. Click **DONE**.

Capturing the Calculator Screen

To capture the calculator screen:

1. Navigate to the **SCREEN CAPTURE** page.



2. Click the **CAPTURE SCREEN** button.

   The current calculator screen will display.

   Note: To capture another screen, make the necessary changes on the calculator and click the **CAPTURE SCREEN** button again.

3. Click one of the following buttons:

    - Copies the current screen to the computer clipboard and use the image in other apps.

    - Saves the current screen to your computer.

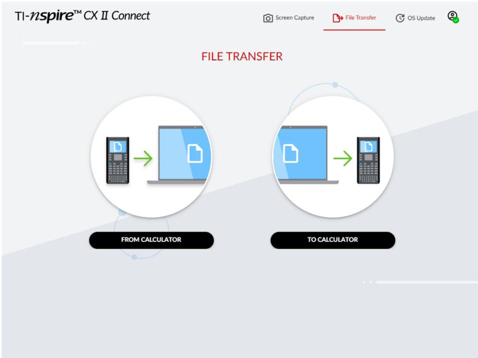
    - Saves the current screen to Google Drive.

   Note: When using Google Drive for screen captures or file transfers, you must create the folder(s) you want to use in Google Drive first.

Transferring Files

To transfer files to or from the computer:

1. Navigate to the **FILE TRANSFER** page.



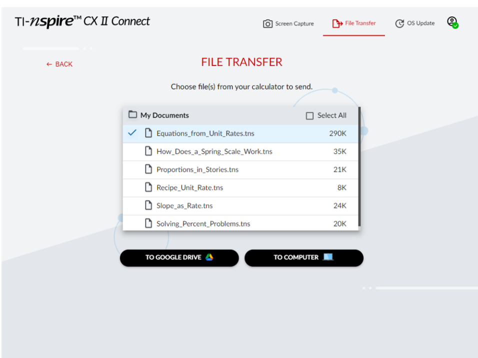
2. Click either **FROM CALCULATOR** or **TO CALCULATOR** and follow the corresponding instructions below.

   Note: Only .tns files can be transferred. Other file types will not be shown. Also, files on the calculator must be in the My Documents folder, not a sub folder.

Transferring files from the calculator to the computer

Choose the file(s) from the My Documents folder on the calculator that you want to send to the computer.

Note: Check or uncheck the **Select All** box to highlight or clear the selection of all files.



To transfer files to Google Drive:

1. Click **TO GOOGLE DRIVE**.
2. Click on the folder you want to save the files to and click **Select**.

Note: When using Google Drive for screen captures or file transfers, you must create the folder(s) you want to use in Google Drive first.

Note: If you transfer files that already exist on Google Drive, they will be automatically overwritten.

3. When the **Files Sent** list appears, you can click **SEND MORE FILES** or the **BACK** link to select more files to transfer.

To transfer files to the computer:

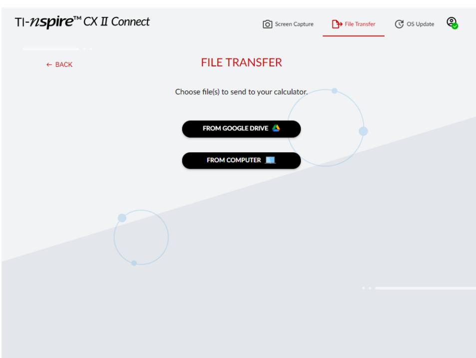
1. Click **TO COMPUTER**.
2. Click on the folder you want to save the files to and click **Select Folder**.
3. When prompted to let the site view files, click **View files**.
4. When prompted to save changes to the destination folder, click **Save changes**.

   Note: If you transfer files that already exist on the computer, a copy of the file will be created with a number appended to the file name.

5. When the **Files Sent** list appears, you can click **SEND MORE FILES** or the **BACK** link to select more files to transfer.

Transferring files from the computer to the calculator

1. Click either **FROM GOOGLE DRIVE** or **FROM COMPUTER**.



2. Locate and select the file(s) to transfer.

   Note: If you transfer files that already exist on the calculator, a copy of the file will be created with a number appended to the file name.

3. When the **Files Sent** list appears, you can click **SEND MORE FILES** or the **BACK** link to select more files to transfer.

   Note: If you transfer files that already exist on the calculator, a copy of the file will be created with a number appended to the file name.

4. On the calculator a prompt will display with the following options:

   Open - Opens the file that was transferred.

   Go To - Opens the My Documents folder and highlights the file that was transferred.

   OK - Clears the prompt.

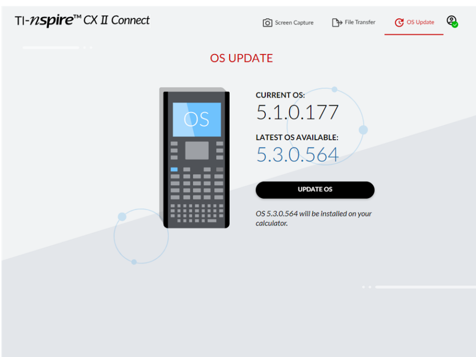
   Note: If you transfer multiple files the prompt will only apply to the last file that was transferred.

Updating the OS

To update the OS on the calculator:

1. Navigate to the **OS UPDATE** page.

   The app will check the OS version on the calculator. If there is a newer version available, you will be prompted to update.



2. Click the **UPDATE OS** button.

   A confirmation message will appear when the update is finished.

General Information

Online Help

education.ti.com/eguide

Select your country for more product information.

Contact TI Support

education.ti.com/ti-cares

Select your country for technical and other support resources.

Service and Warranty Information

education.ti.com/warranty

Select your country for information about the length and terms of the warranty or about product service.

Limited Warranty. This warranty does not affect your statutory rights.

Texas Instruments Incorporated

12500 TI Blvd.

Dallas, TX 75243

Precautions for Rechargeable Batteries

- Do not expose batteries to temperatures above 140°F (60°C).
- Do not disassemble or mistreat batteries.
- Use only the charger recommended for the cell or battery, or the one that was provided with the original equipment.
- TI recommends that you use the USB cable included with this calculator. If you choose to use a third-party power adapter with the TI-supplied USB cable, you should use an adapter that meets applicable safety and operational standards and certifications, including UL and CE certifications.

Take these precautions when replacing rechargeable batteries:

- Replace only with a TI approved battery.
- Remove the cell or battery from the charger or alternating current adapter when not in use or being charged.
- Use of the battery in other devices may result in personal injury or damage to equipment or property.
- Do not mix brands (or types within brands) of batteries. There is a risk of explosion if a battery is replaced by the wrong type.

Disposing of Batteries

Do not mutilate, puncture, or dispose of batteries in fire. The batteries can burst or explode, releasing hazardous chemicals. Discard used batteries according to local regulations.